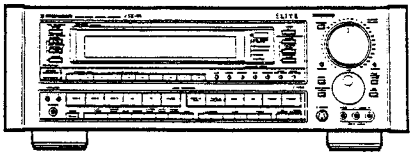
PIONEER
The Art of Entertainment

Service Manual



ORDER NO.
ARP2287

AUDIO/VIDEO STEREO RECEIVER

VSX-95
VSX-9900S

VSX−95 AND VSX−9900S HAVE THE FOLLOWING :

Type	Model		Power Requirement	Remarks
	VSX−95	VSX−9900S		
KUC	○	○	AC120V only	
SD	—	○	AC110V, 120V−127V, 220V, 240V (switchable)	

- **This manual is applicable to the VSX−95/KUC, VSX−9900S/KUC and SD types.**
- **As to the VSX−9900S/KUC and SD types, refer to pages 111−113.**

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This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5). When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

1. SAFETY INFORMATION

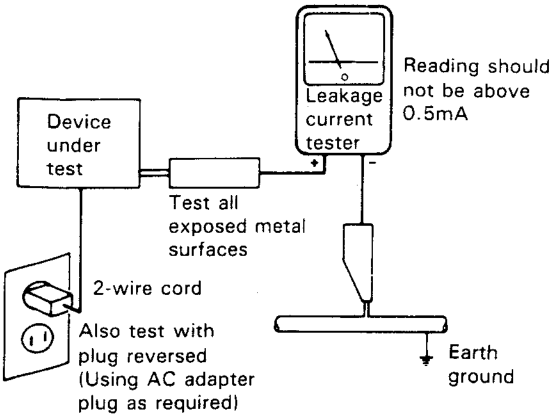
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.


Reading should not be above 0.5mA
Leakage current tester
Device under test
Test all exposed metal surfaces
2-wire cord
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

2. EXPLODED VIEWS, PACKING AND PARTS LIST

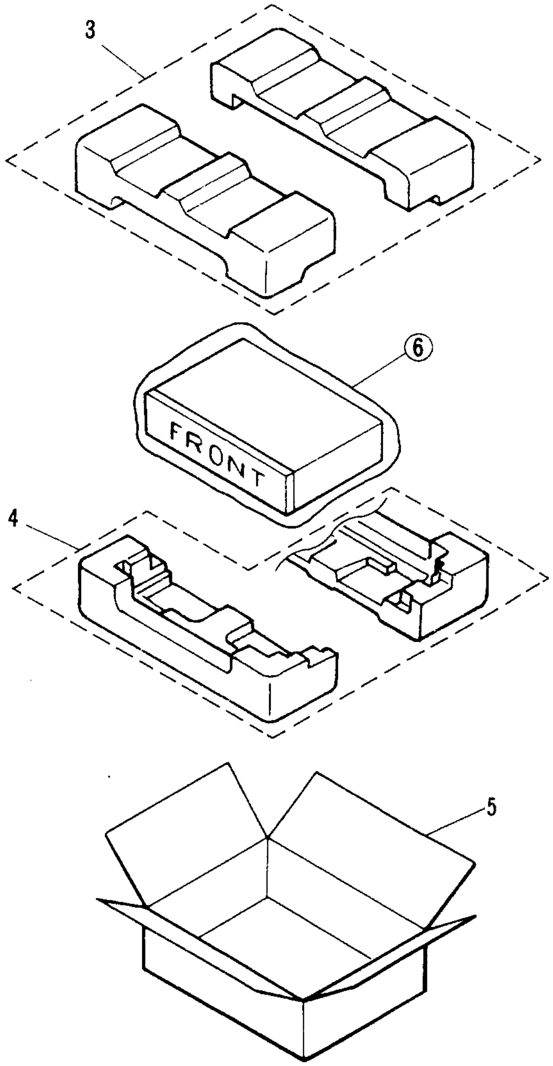
NOTES:

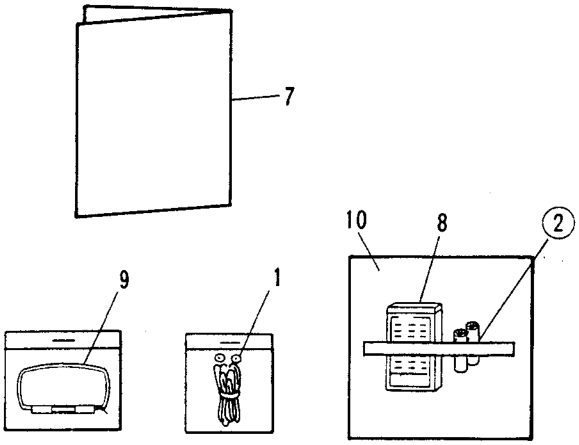
- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

2.1 PACKING

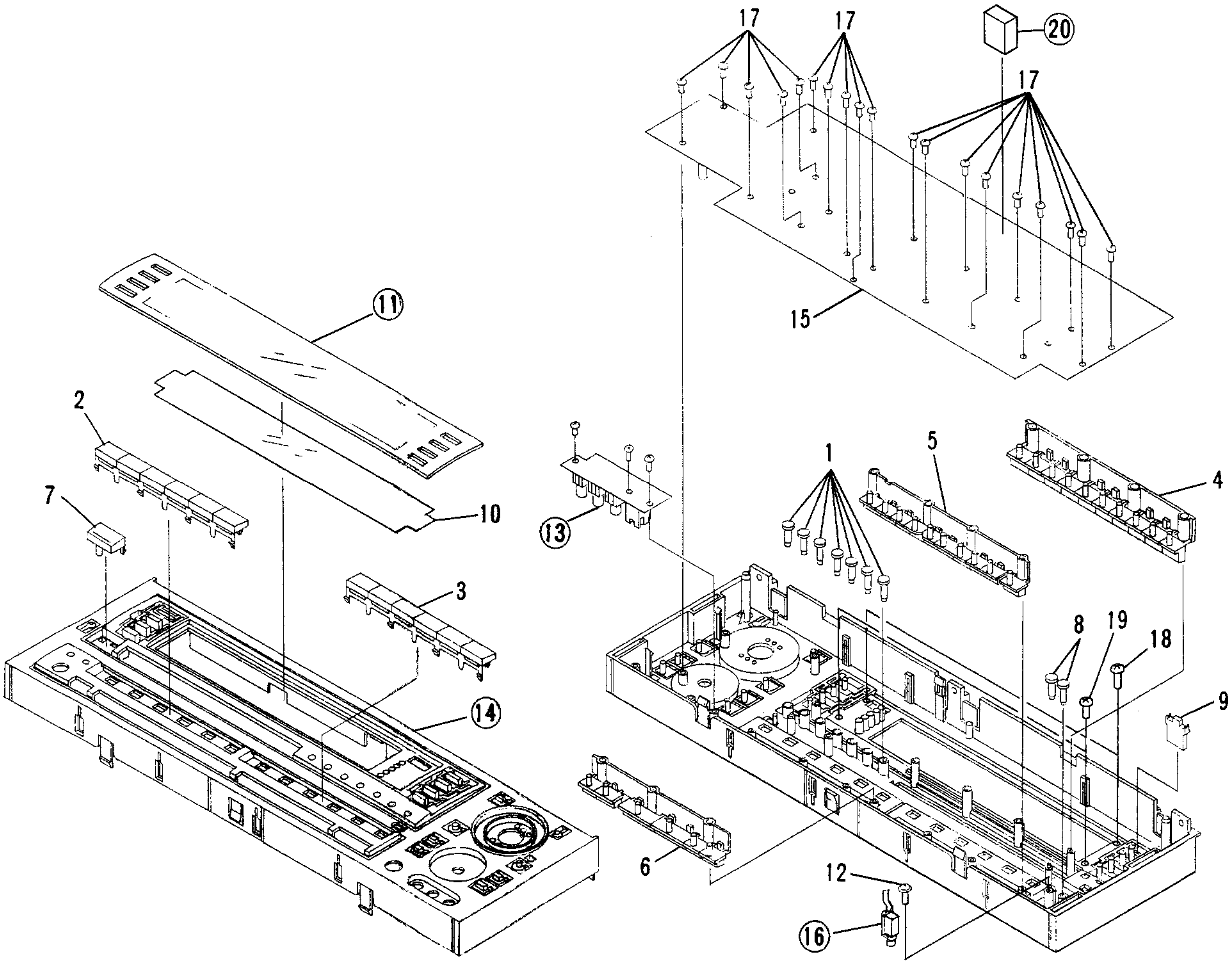
Parts list of Packing

Mark	No.	Description	Parts No.
	1	FM ANTENNA	ADH1004
	2	ALKALINE DRY CELL BATTERY (LR6, AA)	
	3	TOP PAD	AHA1033
	4	BOTTOM PAD	AHA1034
	5	PACKING CASE	AHD2122
	6	PACKING SHEET	
	7	OPERATING INSTRUCTIONS (English)	ARB1333
	8	REMOTE CONTROL UNIT (CU−VSX031)	AXD1223
	9	LOOP ANTENNA	ATB1005
	10	SPACER	AHB1069





2.2 FRONT PANEL SECTION

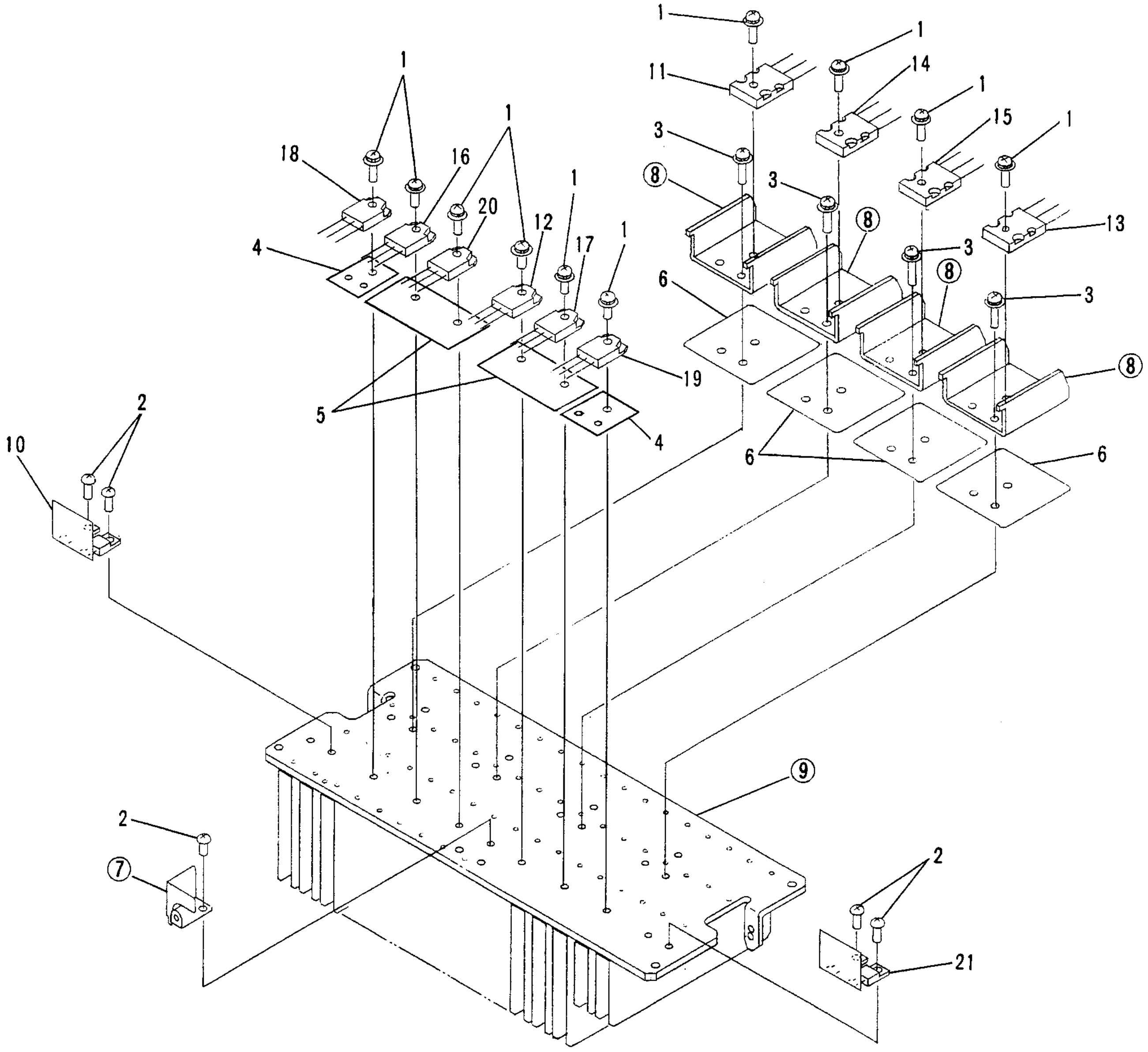


Parts list of Front panel section

Mark	No.	Description	Parts No.
	1	KIN BUTTON (SURROUND MODE)	AAD1609
	2	FUNCTION KNOB (INPUT SELECTOR)	AAD2004
	3	FUNCTION KNOB (INPUT SELECTOR)	AAD2005
	4	STATION BUTTON (PLS)	AAD2006
	5	TUNING BUTTON (PLS)	AAD2007
	6	BALANCE BUTTON (PLS)	AAD2008
	7	POWER BUTTON (PLS)	AAD2009
	8	BUTTON (SPEAKER)	AAD2030
	9	LENS	AAK2144
	10	FL FILTER	AAK2169

Mark	No.	Description	Parts No.
	11	PVC PANEL (PLS)	
	12	PWB SCREW	ABA1085
	13	FRONT VIDEO ASSEMBLY	
	14	PANEL BASE	
●	15	FRONT CONTROL ASSEMBLY	AWZ3569
	16	HEADPHONE ASSEMBLY	
	17	SCREW	BBZ26P080FMC
	18	SCREW	ABA1137
	19	SCREW	ABA1138
	20	CUSHION RUBBER	

2.3 HEAT SINK SECTION



Parts list of Heat sink section

Mark	No.	Description	Parts No.
	1	SCREW (STEEL)	ABA−297
	2	SCREW	ABA−298
	3	SCREW (STEEL)	ABA1105
	4	MICA SHEET	AEC−818
	5	MICA SHEET	AEC1140
	6	MICA SHEET	AEE1033
	7	PCB SUPPORT	
	8	SUB HEAT SINK	
	9	HEAT SINK	
◉	10	REGULATOR 1 ASSEMBLY	AWZ3574

Mark	No.	Description	Parts No.
⚠	11	TRANSISTOR (Q1)	2SC3281
⚠	12	TRANSISTOR (Q10)	2SA1263N
⚠	13	TRANSISTOR (Q2)	2SC3281
⚠	14	TRANSISTOR (Q3)	2SA1302
⚠	15	TRANSISTOR (Q4)	2SA1302
⚠	16	TRANSISTOR (Q5)	2SC3180N
⚠	17	TRANSISTOR (Q6)	2SC3180N
⚠	18	TRANSISTOR (Q7)	2SA1263N
⚠	19	TRANSISTOR (Q8)	2SA1263N
⚠	20	TRANSISTOR (Q9)	2SC3180N
◉	21	REGULATOR 2 ASSEMBLY	AWZ3575

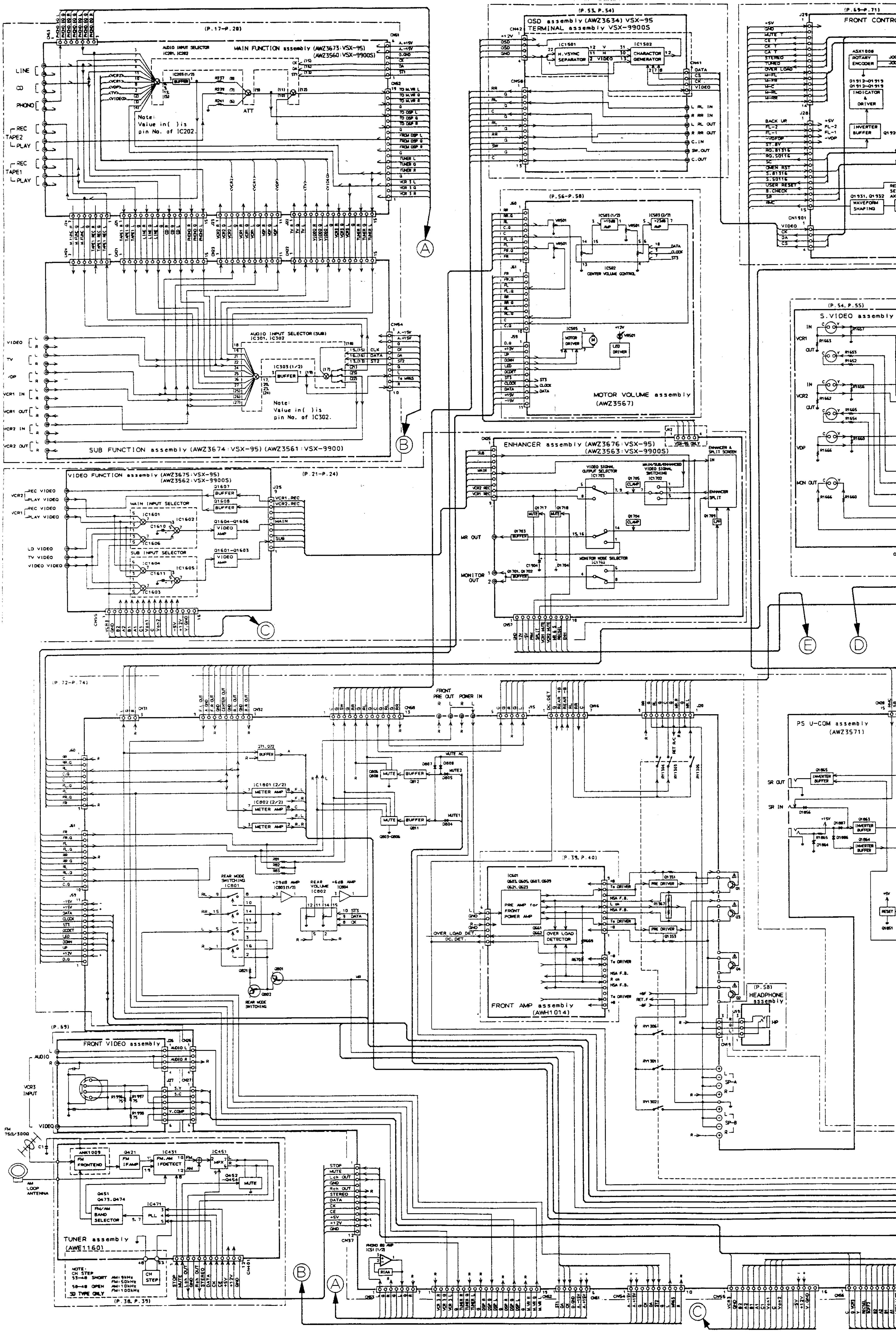
2.4 EXTERIOR

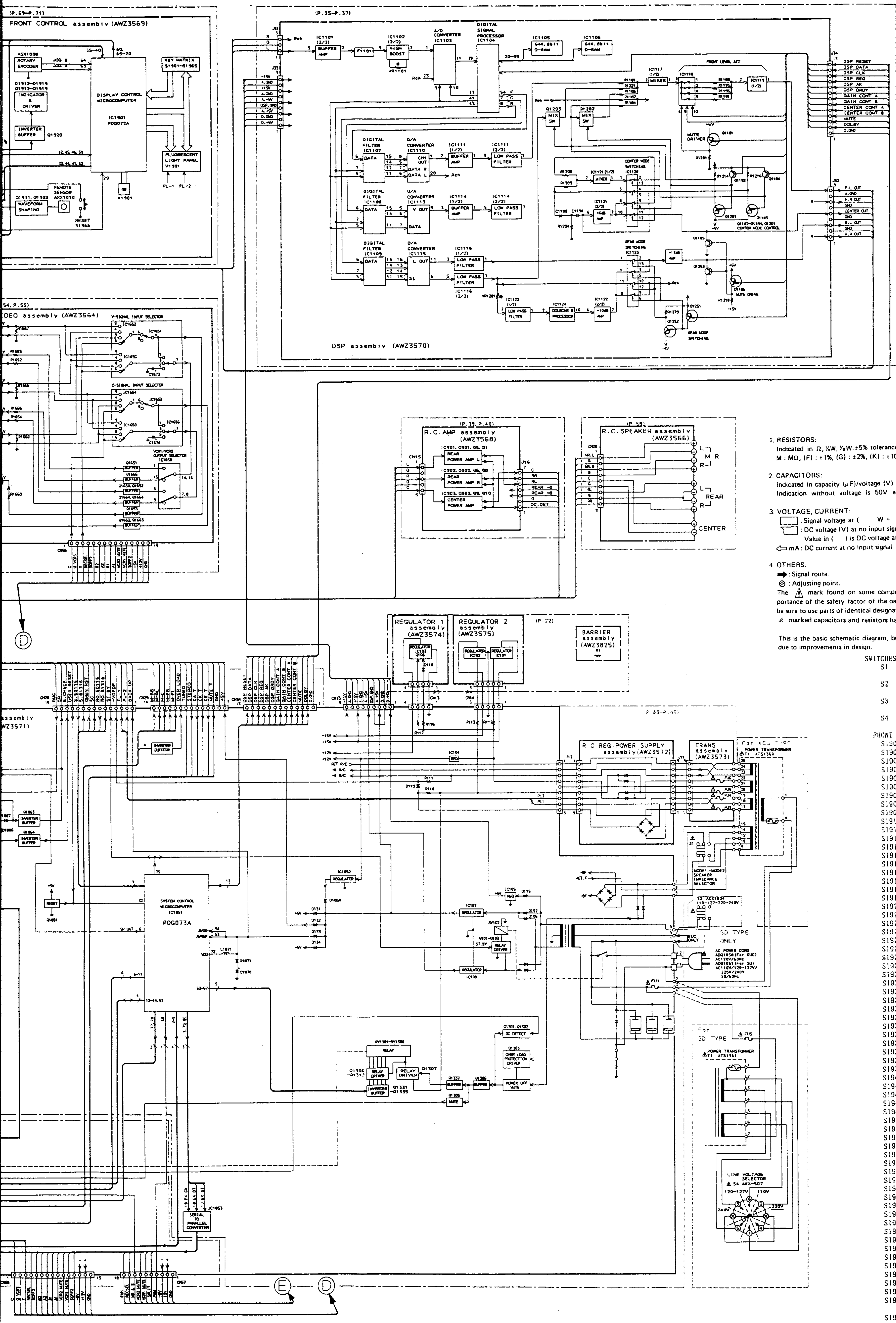
Parts list of Exterior

Mark	No.	Description	Parts No.
	1	ROTARY KNOB (JOG)	AAA1009
	2	MASTER VOL ASSEMBLY	AAB1235
	3	NAME PLATE (METAL)	
◉	4	PS.μ-COM ASSEMBLY	AWZ3571
◉	5	R.C.REG.POWER SUPPLY ASSEMBLY	AWZ3572
◉	6	TRANS ASSEMBLY	AWZ3573
	7	SCREW (STEEL)	ABA-283
	8	SCREW (STEEL)	ABA-297
	9	SCREW	ABA-298
	10	SCREW (STEEL)	ABA1006
	11	SCREW (STEEL)	ABA1009
	12	SCREW (STEEL)	ABA1011
	13	SCREW	ABA1034
	14	SCREW (STEEL)	ABA1086
	15	NUT	ABN1016
⚠	16	AC POWER CORD	ADG1072
	17	SPACER RING	
	18	DAMPER SHEET A	
	19	CUSHION (RUBBER)	
	20	NYLON BINDER	
	21	WOOD COLLAR	AEC1165
	22	SHEET B	
	23	SHEET C	
	24	BARRIER	
	25	SPACER	
	26	HOLDER	
	27	NYLON RIVET	AEP-035
	28	SCREW	VBZ40P160FZK
	29	TERMINAL SCREW	
	30	PLUG	AKM1061
	31	LEG ASSEMBLY	AMR1158
	32	LEG ASSEMBLY	AMR1159
	33	SIDE BOARD R	AMS1056
	34	SIDE BOARD L	AMS1057
	35	CHASSIS	
	36	FRONT PANEL	ANB1480
	37	REAR PANEL	
	38	PANEL STAY	
◉	39	R.C.SPEAKER ASSEMBLY	AWZ3566
	40	METAL BONNET	ANE1307
	41	BOTTOM PLATE	
	42	AC CORD SPACER	ANG1153
	43	HEAT SINK HOLDER	
	44	CASE (TUNER)	
	45	COVER (TUNER)	
	46	CASE (DSP)	
◉	47	MOTOR VOLUME ASSEMBLY	AWZ3567
◉	48	TUNER ASSEMBLY	AWE1160
◉	49	DSP ASSEMBLY	AWZ3570
	50	SCREW	FBT40P080FZK
◉	51	S.VIDEO ASSEMBLY	AWZ3564
◉	52	R.C.AMP ASSEMBLY	AWZ3568
	53	SCREW	VMZ30P060FMC
⚠	54	FUSE (8A, FU1)	AEK1035
⚠	55	FUSE (6.3A, FU3)	AEK-309
⚠	56	FUSE (6.3A, FU4)	AEK-309
⚠	57	FUSE (1.25A, FU5)	AEK-120
⚠	58	FUSE (1.25A, FU6)	AEK-120
	59	FERRITE CORE (L)	ATX1017
	60	POWER TRANSFORMER (T)	ATS1360
◉	61	OSD ASSEMBLY	AWZ3634
◉	62	MAIN FUNCTION ASSEMBLY	AWZ3673
◉	63	SUB FUNCTION ASSEMBLY	AWZ3674
◉	64	VIDEO FUNCTION ASSEMBLY	AWZ3675
◉	65	ENHANCER ASSEMBLY	AWZ3676
◉	66	BARRIER ASSEMBLY	AWZ3825
◉	67	FRONT AMP ASSEMBLY	AWH1014
⚠	68	SPEAKER IMPEDANCE SELECTOR (S1)	AKX1004
	69	SCREW	VMZ26P040FZK
	70	CERAMIC CAPACITOR (C1)	CKDYF103Z50

3. SCHEMATIC DIAGRAMS AND P.C.BOARDS CONNECTION DIAGRAM

3.1 OVER ALL SCHEMATIC DIAGRAM


MAIN FUNCTION assembly (AWZ3673:VSX-95) (AWZ3560:VSX-9900S)
AUDIO INPUT SELECTOR IC201, IC202
Note: Value in( ) is pin No. of IC202.
LINE
CD
PHONO
TAPE2 REC PLAY
TAPE1 REC PLAY
ATT
OSD assembly (AWZ3634) VSX-95
TERMINAL assembly VSX-9900S
H.VSYNC SEPARATOR
CHARACTOR GENERATOR
FRONT CONTRO
ROTARY ENCODER
INDICATOR & DRIVER
INVERTER BUFFER
WAVEFORM SHAPING
IC502 CENTER VOLUME CONTROL
MOTOR DRIVER
LED DRIVER
MOTOR VOLUME assembly (AWZ3567)
AUDIO INPUT SELECTOR (SUB) IC301, IC302
Note: Value in( ) is pin No. of IC302.
SUB FUNCTION assembly (AWZ3674:VSX-95) (AWZ3561:VSX-9900)
VIDEO
TV
VDP
VCR1 IN
VCR1 OUT
VCR2 IN
VCR2 OUT
S.VIDEO assembly
ENHANCER assembly (AWZ3676:VSX-95) (AWZ3563:VSX-9900S)
VIDEO SIGNAL OUTPUT SELECTOR IC1703
MAIN/SUB/ENHANCED VIDEO SIGNAL SWITCHING IC1702
ENHANCER & SPLIT SCREEN
MONITOR MODE SELECTOR
MR OUT
MONITOR OUT
VIDEO FUNCTION assembly (AWZ3675:VSX-95) (AWZ3562:VSX-9900S)
MAIN INPUT SELECTOR
SUB INPUT SELECTOR
LD VIDEO
TV VIDEO
VIDEO VIDEO
A
B
C
D
E
PS U-COM assembly (AWZ3571)
SR OUT
SR IN
FRONT PRE OUT POWER IN
METER AMP
MUTE
BUFFER
REAR MODE SWITCHING IC801
+29dB AMP IC803(1/2)
REAR VOLUME IC802
+6dB AMP IC804
REAR MODE SWITCHING
PRE AMP for FRONT POWER AMP
OVER LOAD DETECTOR
OVER LOAD DET.
DC. DET.
FRONT AMP assembly (AWH1014)
HEADPHONE assembly
SP-A
SP-B
FRONT VIDEO assembly
AUDIO
VCR3 INPUT
FM 75Ω/300Ω
AM LOOP ANTENNA
FM FRONTEND
IFAMP
FM/AM IFDETECT
MPX
MUTE
FM/AM BAND SELECTOR
PLL
TUNER assembly (AWE1160)
NOTE: CH STEP 53→48 SHORT AM:9kHz FM:50kHz; 58→48 OPEN AM:10kHz FM:100kHz; SD TYPE ONLY
CH STEP
PHONO EQ AMP IC51(1/2)
RIAA
1
2
3
4


(P.69–P.71)
FRONT CONTROL assembly (AWZ3569)
ASX1008 ROTARY ENCODER
INDICATOR & DRIVER
INVERTER BUFFER
DISPLAY CONTROL MICROCOMPUTER IC1901 PDG072A
KEY MATRIX S1901–S1965
FLUORESCENT LIGHT PANEL V1901
REMOTE SENSOR AXX1010
WAVEFORM SHAPING
RESET S1966
X1901
(P.35–P.37)
BUFFER AMP
HIGH BOOST
VR1101
A/D CONVERTER IC1103
DIGITAL SIGNAL PROCESSOR IC1104
64K, 8bit D-RAM
FRONT LEVEL ATT
MIXER
MUTE DRIVER
DIGITAL FILTER IC1107
D/A CONVERTER IC1110
LOW PASS FILTER
CENTER MODE SWITCHING IC1120
DIGITAL FILTER IC1108
D/A CONVERTER IC1113
DIGITAL FILTER IC1109
D/A CONVERTER IC1115
REAR MODE SWITCHING IC1123
MUTE DRIVE
DOLBY B PROCESSOR
REAR MODE SWITCHING
DSP RESET
DSP DATA
DSP CLK
DSP REQ
DSP AK
DSP DRDY
GAIN CONT A
GAIN CONT B
CENTER CONT A
CENTER CONT B
MUTE
DOLBY
D.GND
F.L OUT
F.R OUT
CENTER OUT
R.L OUT
R.R OUT
DSP assembly (AWZ3570)
VIDEO assembly (AWZ3564)
Y-SIGNAL INPUT SELECTOR
C-SIGNAL INPUT SELECTOR
VCR/MON2 OUTPUT SELECTOR
BUFFER
(P.39, P.40)
R.C.AMP assembly (AWZ3568)
REAR POWER AMP L
REAR POWER AMP R
CENTER POWER AMP
(P.58)
R.C.SPEAKER assembly (AWZ3566)
M.R
REAR
CENTER
REGULATOR 1 assembly (AWZ3574)
REGULATOR 2 assembly (AWZ3575)
(P.22)
BARRIER assembly (AWZ3825)
R.C.REG.POWER SUPPLY assembly (AWZ3572)
TRANS assembly (AWZ3573)
For KUC TYPE
POWER TRANSFORMER ATS1360
SPEAKER IMPEDANCE SELECTOR
S2 AKX1004 110-127-220-240V
SD TYPE ONLY
AC POWER CORD
SYSTEM CONTROL MICROCOMPUTER IC1851 PDG073A
RESET
INVERTER BUFFER
REGULATOR
RELAY DRIVER
RELAY
BUFFER
MUTE
DC DETECT
OVER LOAD PROTECTION DRIVER
POWER OFF MUTE
SERIAL TO PARALLEL CONVERTER
For SD TYPE
POWER TRANSFORMER ATS1361
LINE VOLTAGE SELECTOR S4 AKX-507
120–127V
110V
220V
240V
E
D
5
6
7
8
9
A
E
F

1. RESISTORS:
Indicated in Ω, ¼W, ⅛W, ±5% tolerance unless otherwise noted k : kΩ, M : MΩ, (F) : ±1%, (G) : ±2%, (K) : ±10% (M); ±20% tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p : pF
Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE, CURRENT:
▭ : Signal voltage at (W + W 8Ω)output (1kHz)
▭ : DC voltage (V) at no input signal
Value in ( ) is DC voltage at rated power.
⇦ mA : DC current at no input signal

4. OTHERS:
➡ : Signal route.
⊘ : Adjusting point.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
⚹ marked capacitors and resistors have parts numbers.

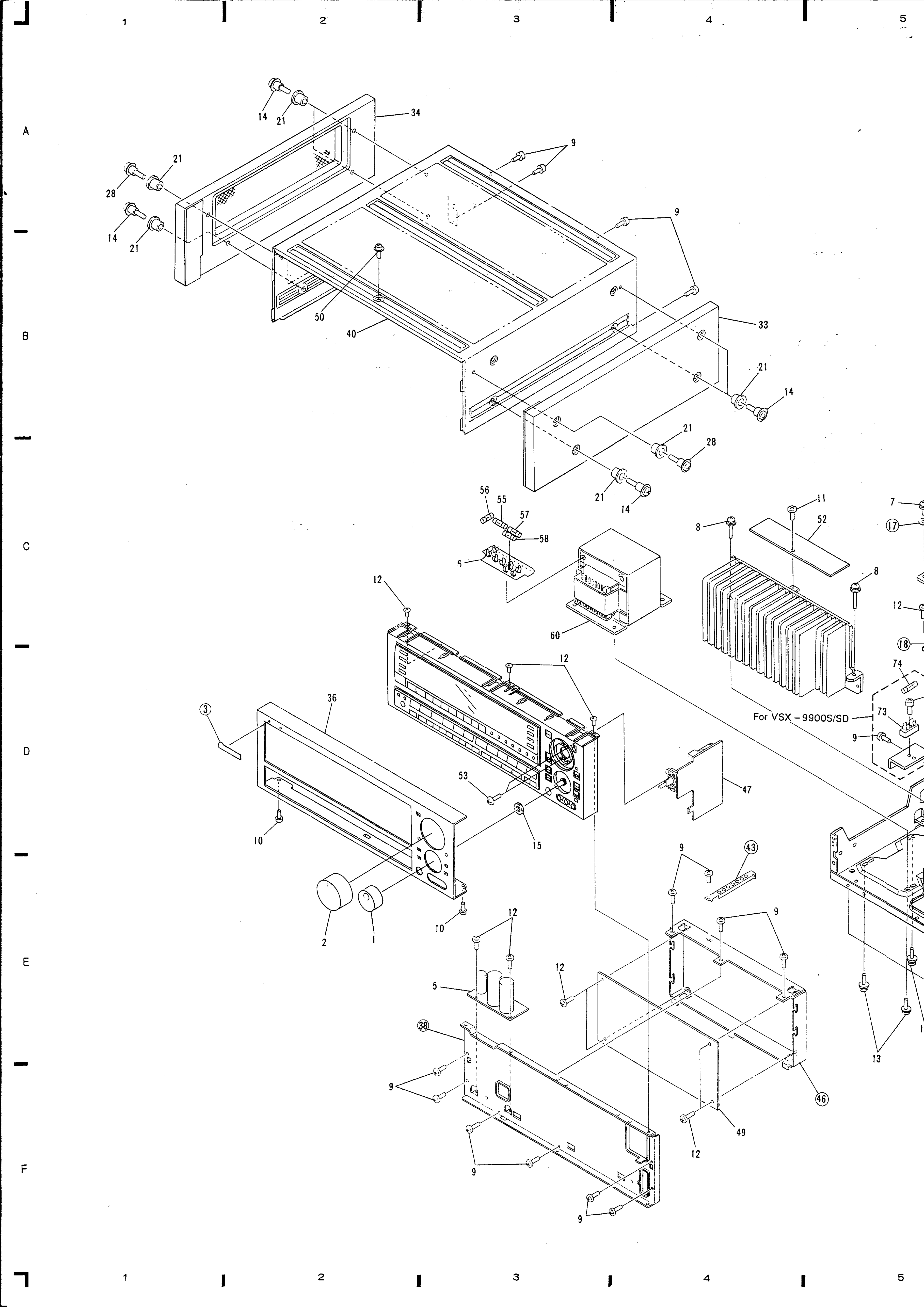
This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

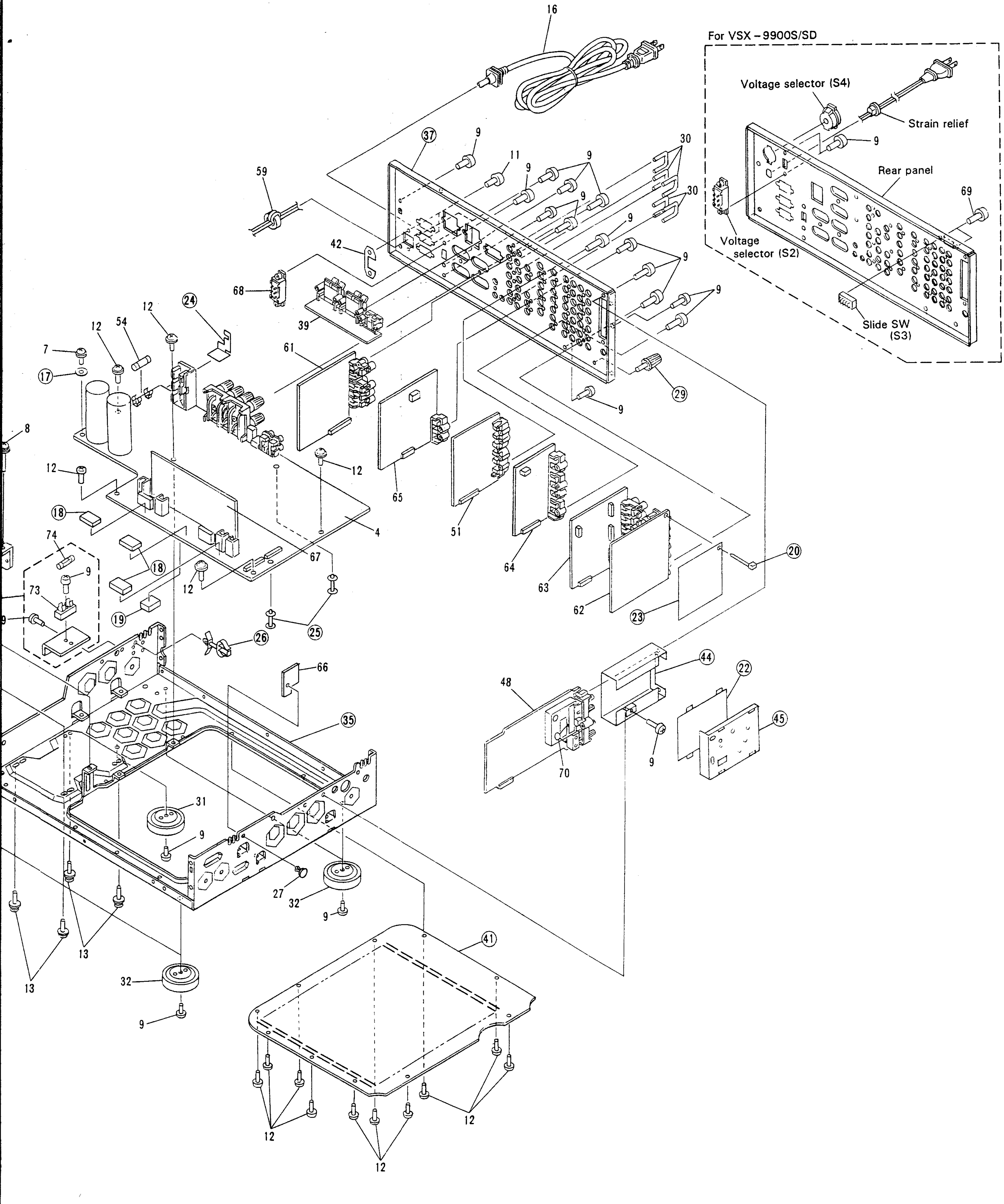
SWITCHES

S1	SPEAKER IMPEDANS SELECTOR (KUC TYPE ONLY)
S2	VOLTAGE SELECTOR SWITCH (SD TYPE ONLY)
S3	SLIDE SWITCH (SD TYPE ONLY)
S4	VOLTAGE SELECTOR SWITCH (SD TYPE ONLY)

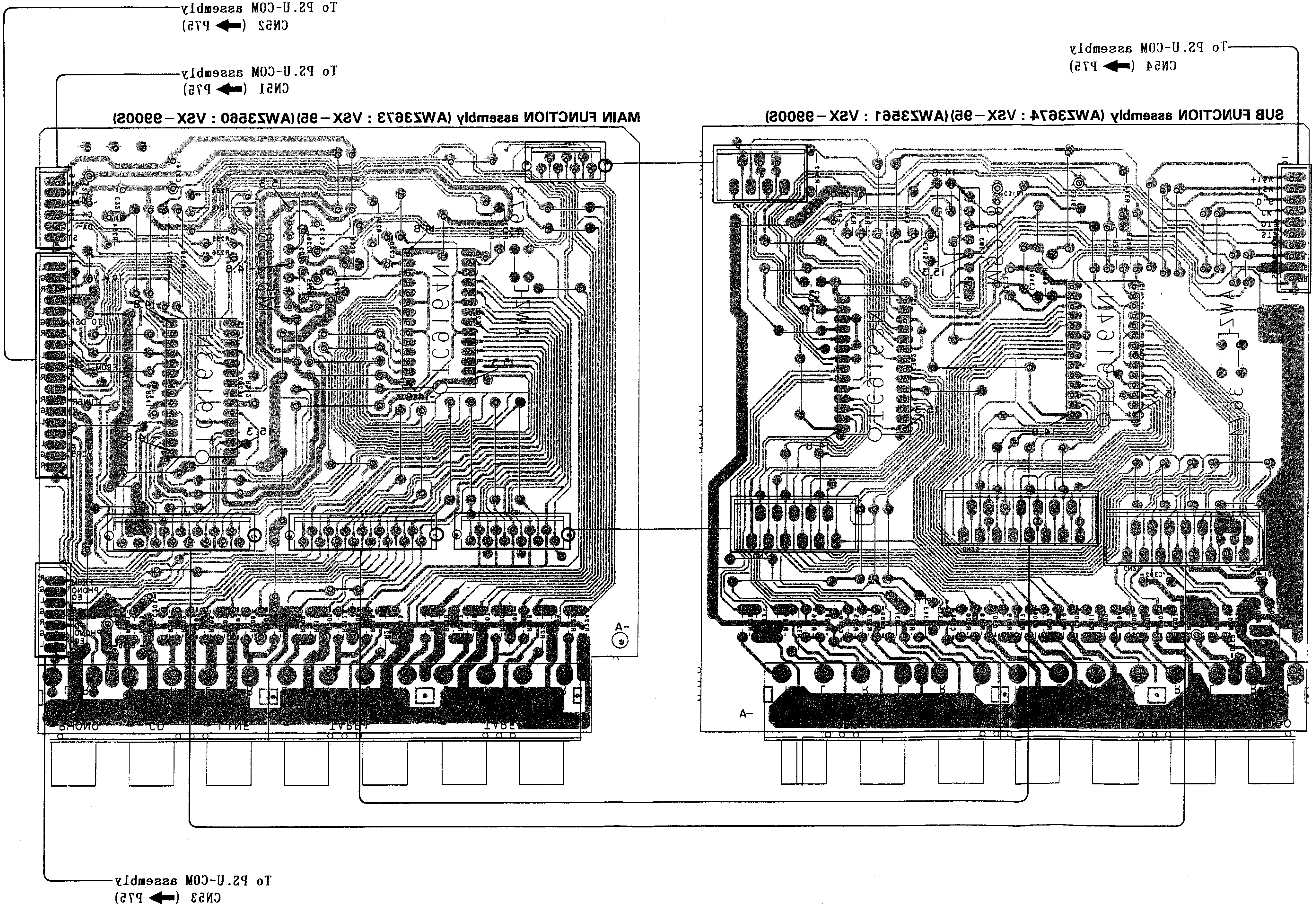
FRONT CONTROL Ass'y

S1901	3CH LOGIC
S1902	INPUT ATT
S1903	RETURN
S1904	ACO.ENH SEL
S1905	ACO.SEL
S1906	ENH SEL
S1907	S.S.
S1908	MUTING
S1909	DIRECT
S1910	SPILT ON/OFF
S1911	JDG MODE
S1912	ENH ON/OFF
S1913	HALL
S1914	PRO.LOGIC
S1915	DANCE
S1916	THEATER
S1917	CHURCH
S1918	JAZZ
S1919	CD
S1920	PHONO
S1921	TAPE 2
S1922	TUNER
S1923	- LINE
S1924	TAPE 1
S1925	TRE +
S1926	V.SEL
S1927	BASS
S1928	REC.SEL
S1929	TRE -
S1930	BASS -
S1931	HITS
S1932	BAL.L
S1933	NAME
S1934	BAL.R
S1935	DIRECT ACCESS
S1936	AUTO/MONO
S1937	CUSTOM SELECT
S1938	MEMORY
S1939	BAND
S1940	MEMORY SCAN
S1941	TUNE +
S1942	TUNE -
S1943	VCR 3
S1944	VCR 1
S1945	VIDEO
S1946	VCR 2
S1947	LD
S1948	TV
S1949	7
S1950	5
S1951	9
S1952	6
S1953	8
S1954	10
S1955	MR&S
S1956	1
S1957	4
S1958	SCENE 1
S1959	2
S1960	3
S1961	SCENE MEMO
S1962	POWER
S1963	SP-B
S1964	SCENE 2
S1965	SP-A
S1966	RESET
S1970	ROTARY ENCODER

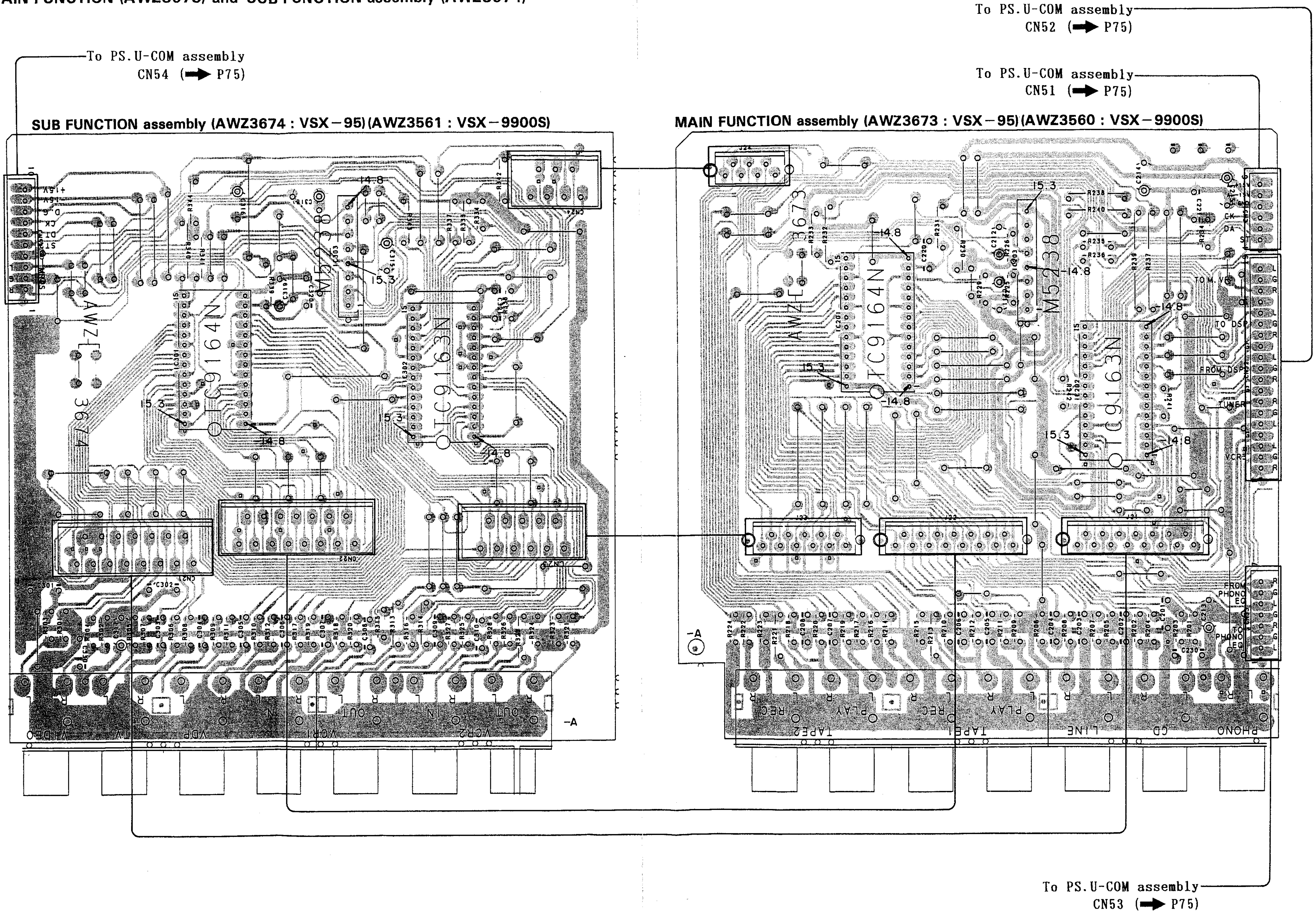

A
B
C
D
E
F
⑰
⑱
For VSX – 9900S/SD
③
㊸
㊳
㊻


For VSX – 9900S/SD
Voltage selector (S4)
Strain relief
Rear panel
Voltage selector (S2)
Slide SW (S3)

This P.C.B. connection diagram is viewed from the foil side.


To PS.U-COM assembly
CN52 (← P75)
To PS.U-COM assembly
CN51 (← P75)
To PS.U-COM assembly
CN54 (← P75)
To PS.U-COM assembly
CN53 (← P75)
MAIN FUNCTION assembly (AWZ3673 : VSX-95)(AWZ3560 : VSX-9900S)
SUB FUNCTION assembly (AWZ3674 : VSX-95)(AWZ3661 : VSX-9900S)
A
B
C
D
6
5
4
3
2
1
TO DSP
FROM DSP
TUNER
VCR
FROM PHONO EQ
TO PHONO EQ
PHONO
CD
LINE
TAPE1
TAPE2
VIDEO
A−
L
R

3.2 MAIN FUNCTION (AWZ3673) and SUB FUNCTION assembly (AWZ3674)



To PS.U-COM assembly
CN52 (➡ P75)

To PS.U-COM assembly
CN51 (➡ P75)

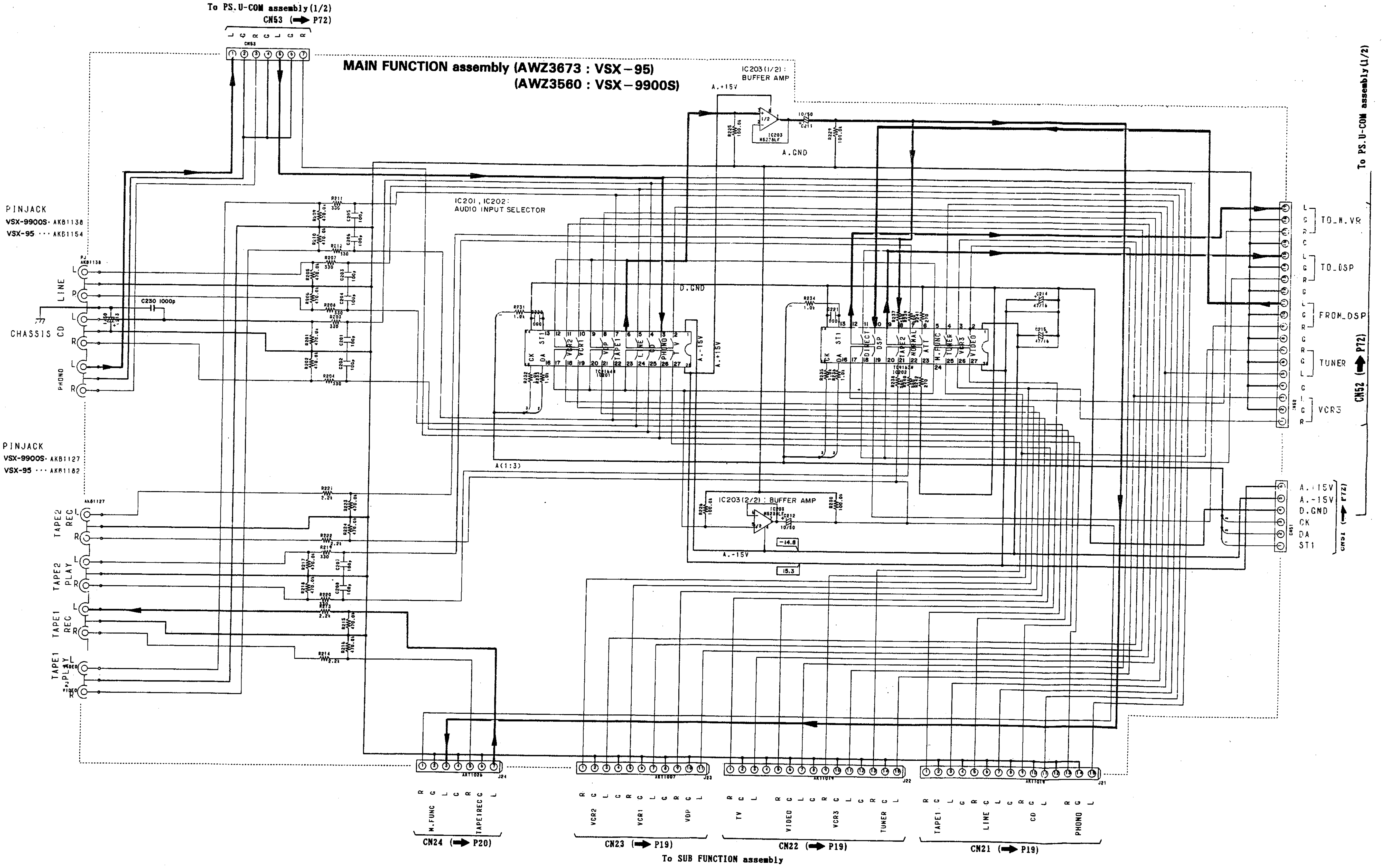
To PS.U-COM assembly
CN54 (➡ P75)

SUB FUNCTION assembly (AWZ3674 : VSX−95)(AWZ3561 : VSX−9900S)

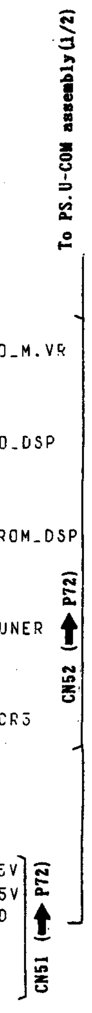
MAIN FUNCTION assembly (AWZ3673 : VSX−95)(AWZ3560 : VSX−9900S)

To PS.U-COM assembly
CN53 (➡ P75)

AWZ 3674
AWZ 3673
TC9164N
TC9163N
M5238
15.3
14.8
IC301
IC302
IC303
IC201
IC202
IC203
CN21
CN22
CN23
CN24
J21
J22
J23
J24
+15V
−15V
D.G
CK
DI
ST
DA
TO M.VCR
TO DSP
FROM DSP
TUNER
VCR3
FROM PHONO EQ
TO PHONO EQ
VIDEO
TV
VDP
IN
OUT
VCR1
VCR2
TAPE2
TAPE1
REC
PLAY
LINE
CD
PHONO
L
R
−A

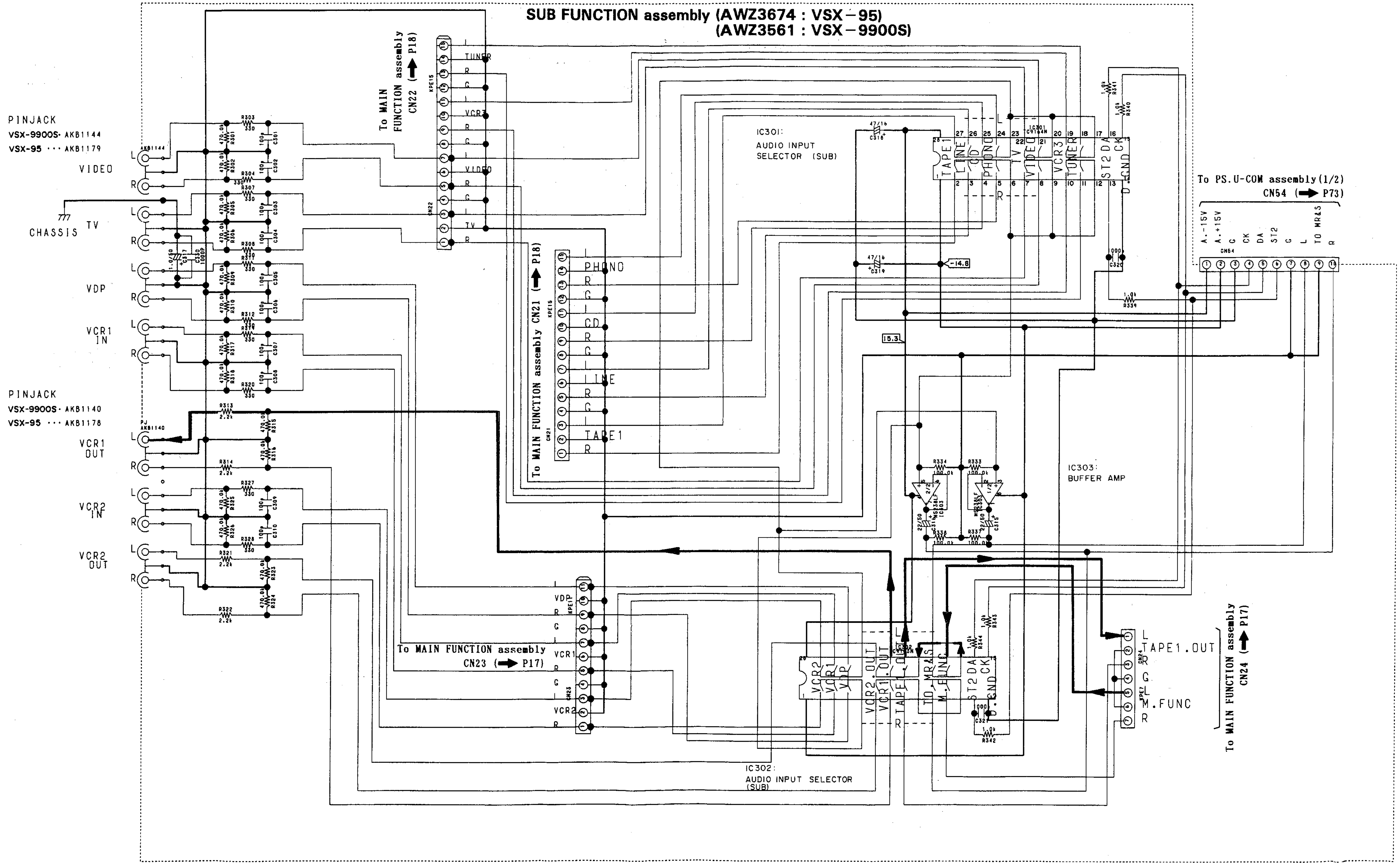


To PS.U-COM assembly(1/2)
CN53 (➡ P72)
MAIN FUNCTION assembly (AWZ3673 : VSX-95)
(AWZ3560 : VSX-9900S)
IC203(1/2) : BUFFER AMP
A.+15V
A.GND
IC201, IC202 : AUDIO INPUT SELECTOR
D.GND
PINJACK
VSX-9900S · AKB1138
VSX-95 · · · AKB1154
LINE
CD
PHONO
CHASSIS
C230 1000p
PINJACK
VSX-9900S · AKB1127
VSX-95 · · · AKB1182
TAPE2 REC
TAPE2 PLAY
TAPE1 REC
TAPE1 PLAY
A(1:3)
IC203(2/2) : BUFFER AMP
A.-15V
-14.8
15.3
TO_M.VR
TO_DSP
FROM_DSP
TUNER
VCR3
CN52 (➡ P72)
To PS.U-COM assembly(1/2)
A.+15V
A.-15V
D.GND
CK
DA
ST1
CN51 (➡ P72)
M.FUNC
TAPE1REC
CN24 (➡ P20)
VCR2
VCR1
VDP
CN23 (➡ P19)
TV
VIDEO
VCR3
TUNER
CN22 (➡ P19)
TAPE1
LINE
CD
PHONO
CN21 (➡ P19)
To SUB FUNCTION assembly



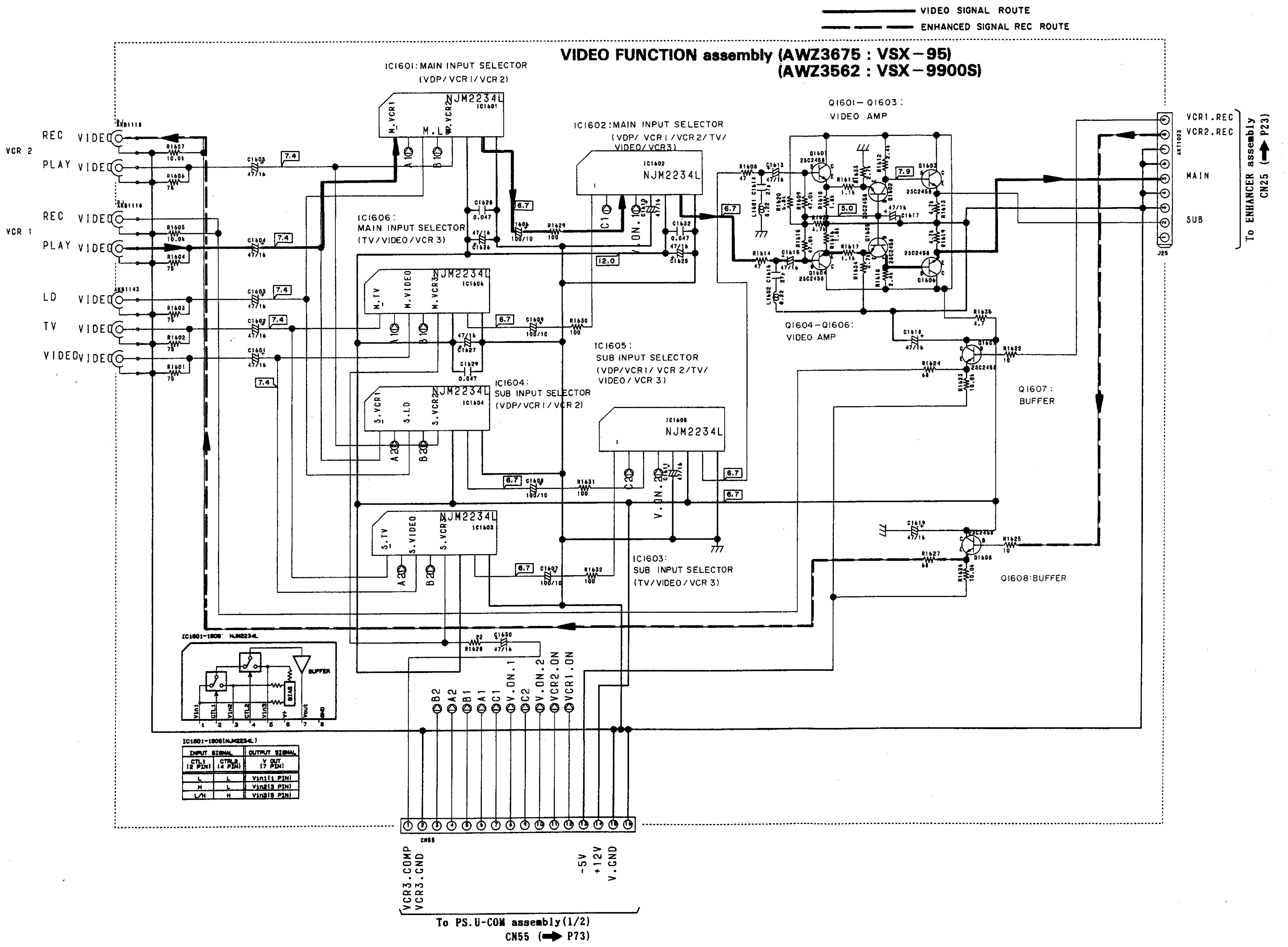
To PS.U-COM assembly(1/2)
D_M.VR
D_DSP
ROM_DSP
UNER
CN52 (→ P72)
CR3
5V
5V
D
CN51 (→ P72)

SUB FUNCTION assembly (AWZ3674 : VSX−95)
(AWZ3561 : VSX−9900S)



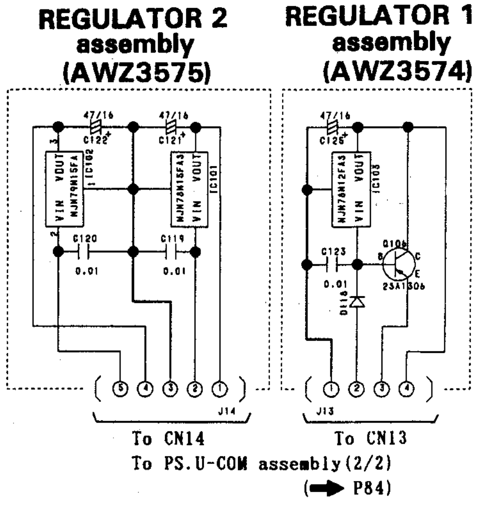
PINJACK
VSX-9900S · AKB1144
VSX-95 ··· AKB1179
AKB1144
VIDEO
TV
CHASSIS
VDP
VCR1 IN
PINJACK
VSX-9900S · AKB1140
VSX-95 ··· AKB1178
PJ AKB1140
VCR1 OUT
VCR2 IN
VCR2 OUT
L
R
R303 330
R304 330
R307 330
R308 330
R310 330
R312 330
R320 330
R313 2.2k
R314 2.2k
R327 330
R328 330
R321 2.2k
R322 2.2k
C301 C302 C303 C304 C305 C306 C307 C308 C309 C310 100p
470.0k
R301 R302 R305 R306 R309 R310 R311 R318 R315 R316 R325 R326 R323 R324
C317 1.0/50
C330 1000p
To MAIN FUNCTION assembly CN22 (→ P18)
KPE15
CN22
TUNER
VCR3
VIDEO
TV
G
To MAIN FUNCTION assembly CN21 (→ P18)
KPE16
CN21
PHONO
CD
LINE
TAPE1
To MAIN FUNCTION assembly CN23 (→ P17)
KPE17
CN23
VDP
VCR1
VCR2
IC301:
AUDIO INPUT SELECTOR (SUB)
IC301 CXD1164M
C318 47/16
C319 47/16
-14.8
15.3
TAPE1 LINE CD PHONO TV VIDEO VCR3 TUNER ST2 DA CK D.GND
28 27 26 25 24 23 22 21 20 19 18 17 16
1 2 3 4 5 6 7 8 9 10 11 12 13
R341 R340 1.0k
C320 1000p
R339 1.0k
To PS.U-COM assembly(1/2) CN54 (→ P73)
CN54
A.-15V A.+15V G CK DA ST2 G L TO MR&S R
1 2 3 4 5 6 7 8 9 10
IC303:
BUFFER AMP
R334 100.0k
R333 100.0k
R336 100.0k
R337 100.0k
IC303 NJM2068LD
C314 C315 22/50
IC302 CXD1164M
VCR2 VCR1 VDP VCR2 OUT VCR1 OUT TAPE1 OUT TO MR&S M.FUNC ST2 DA CK D.GND
R343 R344 1.0k
C321 1000p
R342 1.0k
IC302:
AUDIO INPUT SELECTOR (SUB)
CN24 KPE7
TAPE1.OUT
M.FUNC
To MAIN FUNCTION assembly CN24 (→ P17)

3.3 VIDEO FUNCTION (AWZAWZ3675), REGULATOR 1 (AWZAWZ3574), REGULATOR 2 (AWZ3575), ENHANCER (AWZ3676) and BARRIER assembly (AWZ3825)


VIDEO SIGNAL ROUTE
ENHANCED SIGNAL REC ROUTE
VIDEO FUNCTION assembly (AWZ3675 : VSX-95)
(AWZ3562 : VSX-9900S)
IC1601: MAIN INPUT SELECTOR (VDP/VCR1/VCR2)
IC1602: MAIN INPUT SELECTOR (VDP/VCR1/VCR2/TV/VIDEO/VCR3)
IC1606: MAIN INPUT SELECTOR (TV/VIDEO/VCR3)
IC1604: SUB INPUT SELECTOR (VDP/VCR1/VCR2)
IC1605: SUB INPUT SELECTOR (VDP/VCR1/VCR2/TV/VIDEO/VCR3)
IC1603: SUB INPUT SELECTOR (TV/VIDEO/VCR3)
Q1601–Q1603: VIDEO AMP
Q1604–Q1606: VIDEO AMP
Q1607: BUFFER
Q1608: BUFFER
NJM2234L
VCR 2
VCR 1
REC VIDEO
PLAY VIDEO
LD VIDEO
TV VIDEO
VIDEO VIDEO
VCR1.REC
VCR2.REC
MAIN
SUB
J25
To ENHANCER assembly CN25 (→ P23)
M.VCR1
M.VCR2
M.LD
M.TV
M.VIDEO
M.VCR3
S.VCR1
S.LD
S.VCR2
S.TV
S.VIDEO
S.VCR3
V.ON.1
V.ON.2
7.4
6.7
12.0
7.9
5.0
IC1601–1606 NJM2234L
Vin1
CTL1
Vin2
CTL2
Vin3
V+
Vout
GND
BIAS
BUFFER
B2
A2
B1
A1
C1
C2
VCR2.ON
VCR1.ON
CN55
VCR3.COMP
VCR3.GND
-5V
+12V
V.GND
To PS.U-COM assembly (1/2)
CN55 (→ P73)

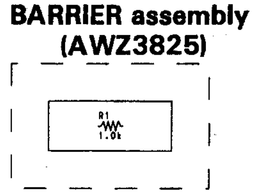
IC1601-1606(NJM2234L)

INPUT SIGNAL		OUTPUT SIGNAL
CTL1 (2 PIN)	CTRL2 (4 PIN)	V OUT (7 PIN)
L	L	Vin1(1 PIN)
H	L	Vin2(3 PIN)
L/H	H	Vin3(5 PIN)


REGULATOR 2 assembly (AWZ3575)

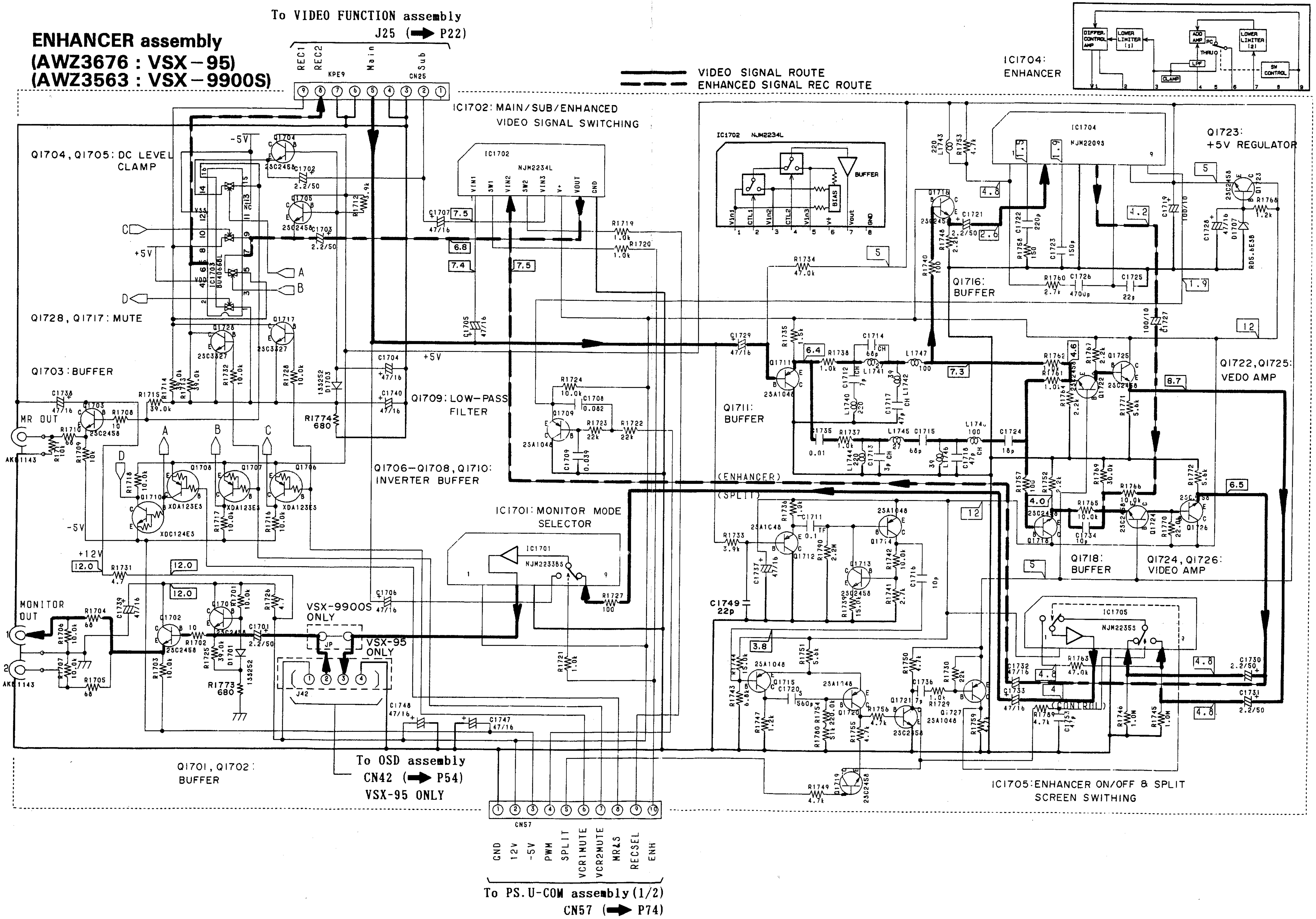
REGULATOR 1 assembly (AWZ3574)

47/16
C122
C121
C120
C119
0.01
IC102
IC101
VIN VOUT
NJM78M15FA
NJM79M15FA
J14
To CN14
C126
C123
IC103
Q101
2SA1306
D101
J13
To CN13
To PS.U-COM assembly (2/2)
(→ P84)


BARRIER assembly (AWZ3825)

ENHANCER assembly
(AWZ3676 : VSX－95)
(AWZ3563 : VSX－9900S)

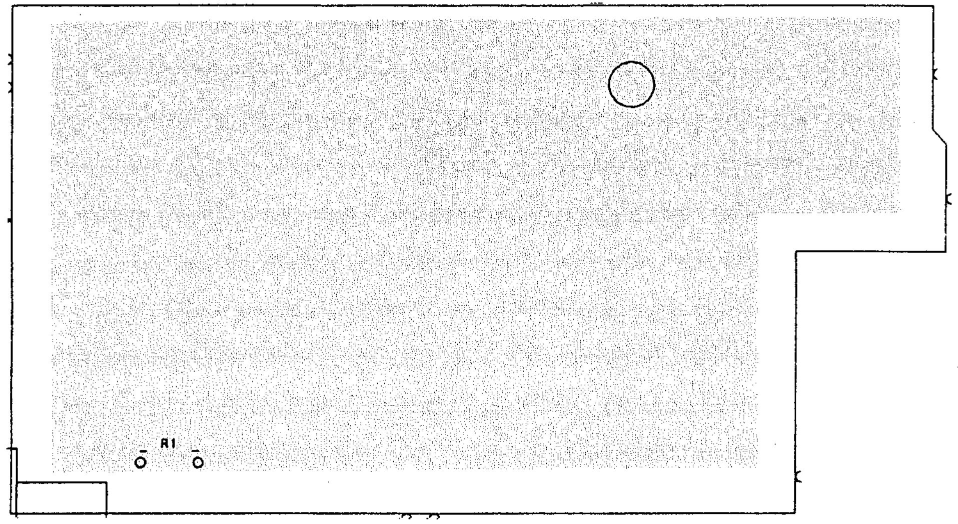
VIDEO SIGNAL ROUTE
ENHANCED SIGNAL REC ROUTE

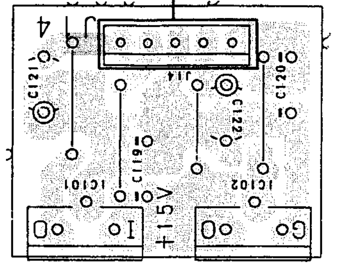

To VIDEO FUNCTION assembly
J25 (➡ P22)
REC1
REC2
KPE9
Main
CN25
Sub
IC1702: MAIN/SUB/ENHANCED VIDEO SIGNAL SWITCHING
IC1702 NJM2234L
VIN1 SW1 VIN2 SW2 VIN3 V+ VOUT GND
IC1702 NJM2234L
Vin1 CTL1 Vin2 CTL2 Vin3 V+ Vout GND
BUFFER
BIAS
IC1704: ENHANCER
IC1704 NJM2209S
DIFFER. CONTROL AMP
LOWER LIMITER (1)
ADD AMP
LOWER LIMITER (2)
THRU
LPF
CLAMP
SW CONTROL
IC1704 NJM22093
Q1723: +5V REGULATOR
Q1704, Q1705: DC LEVEL CLAMP
IC1703 BU4066BL
Q1728, Q1717: MUTE
Q1703: BUFFER
MR OUT
AKB1143
Q1709: LOW-PASS FILTER
Q1706–Q1708, Q1710: INVERTER BUFFER
Q1711: BUFFER
Q1716: BUFFER
Q1722, Q1725: VEDO AMP
Q1718: BUFFER
Q1724, Q1726: VIDEO AMP
(ENHANCER)
(SPLIT)
IC1701: MONITOR MODE SELECTOR
IC1701 NJM2233BS
MONITOR OUT
VSX-9900S ONLY
VSX-95 ONLY
JP
J42
IC1705 NJM2235S
(CONTROL)
IC1705: ENHANCER ON/OFF & SPLIT SCREEN SWITHING
Q1701, Q1702: BUFFER
To OSD assembly
CN42 (➡ P54)
VSX-95 ONLY
CN57
GND 12V -5V PWM SPLIT VCR1MUTE VCR2MUTE MR&S RECSEL ENH
To PS.U-COM assembly (1/2)
CN57 (➡ P74)
+5V
-5V
+12V
12.0
7.5
6.8
7.4
7.5
6.4
7.3
4.6
8.7
6.5
4.0
3.8
4.8
4.2
1.9
2.6
5
12
4
A B C D
7 8 9 10 11 12

To PS.U-COM assembly
CN14 (➡ P76)

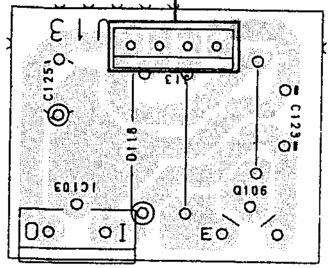
To PS.U-COM assembly
CN13 (➡ P75)

BARRIER assembly (AWZ3825)




J14
C121
C120
C122
C119
IC101
IC102
+15V
O
I
G

REGULATOR 2 assembly (AWZ3575)

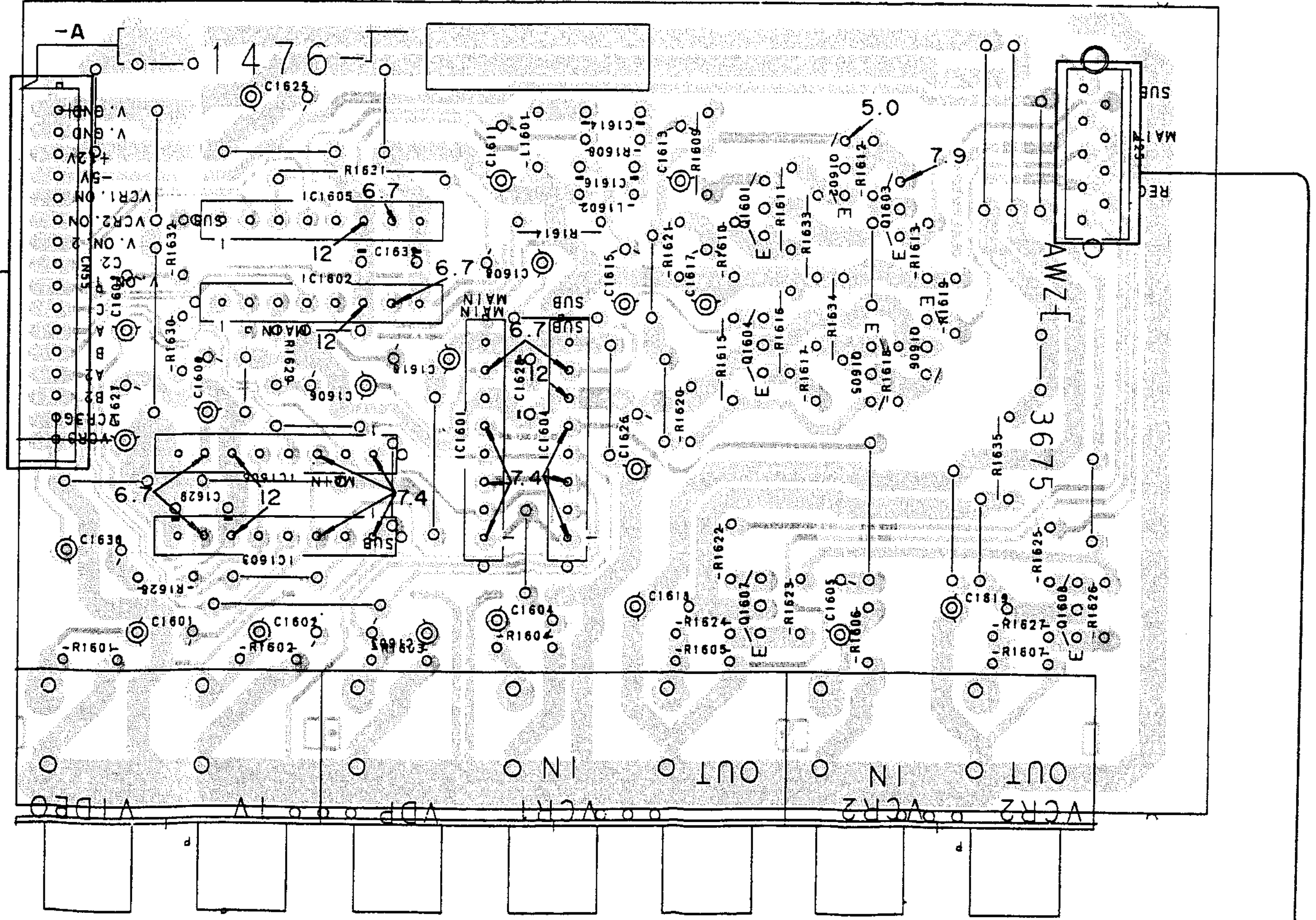

J13
C125
C123
Q118
IC103
Q106
O
I
E

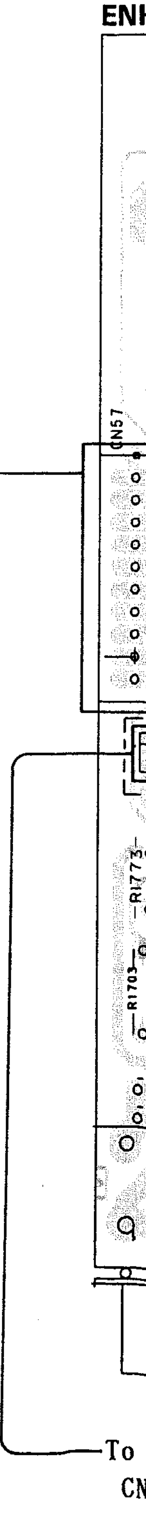
REGULATOR 1 assembly (AWZ3574)

To PS.U-COM assembly
CN55 (➡ P75)

To PS.U-COM assembly
CN57 (➡ P76)

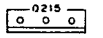
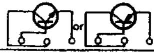
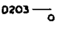
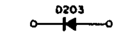
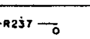
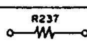
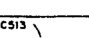
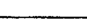
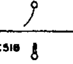
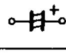
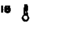
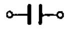
VIDEO FUNCTION assembly (AWZ3675 : VSX−95) (AWZ3562 : VSX−9900S)


-A
1476
AWZ
3675
5.0
7.9
6.7
12
7.4
SUB
MAIN
REC
V.GND
+12V
-5V
VCR1.ON
VCR2.ON
V.ON
GND
IC1601
IC1602
IC1603
IC1605
VIDEO
VDP
VCR1
VCR2
IN
OUT


ENH
CN57
To
CN

NOTE

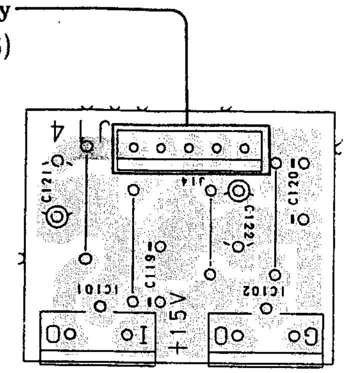
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
 0504		Transistor
 0215		Radiator type transistor
 0203	 0203	Diode
 R237	 R237	Resistor
 C513		Capacitor (Polarity)
 C518		Capacitor (Non-polarity)

Others

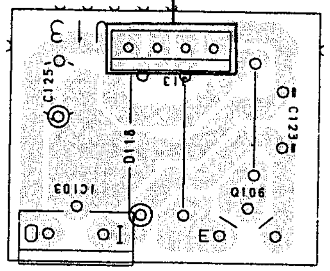
P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capactor terminal marked with ◎ (double circles) shows negatine termianl.
4. The diode terminal marked with ◎ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.



ULATOR 2 assembly (AWZ3575)

To PS.U-COM assembly
CN13 (➡ P75)

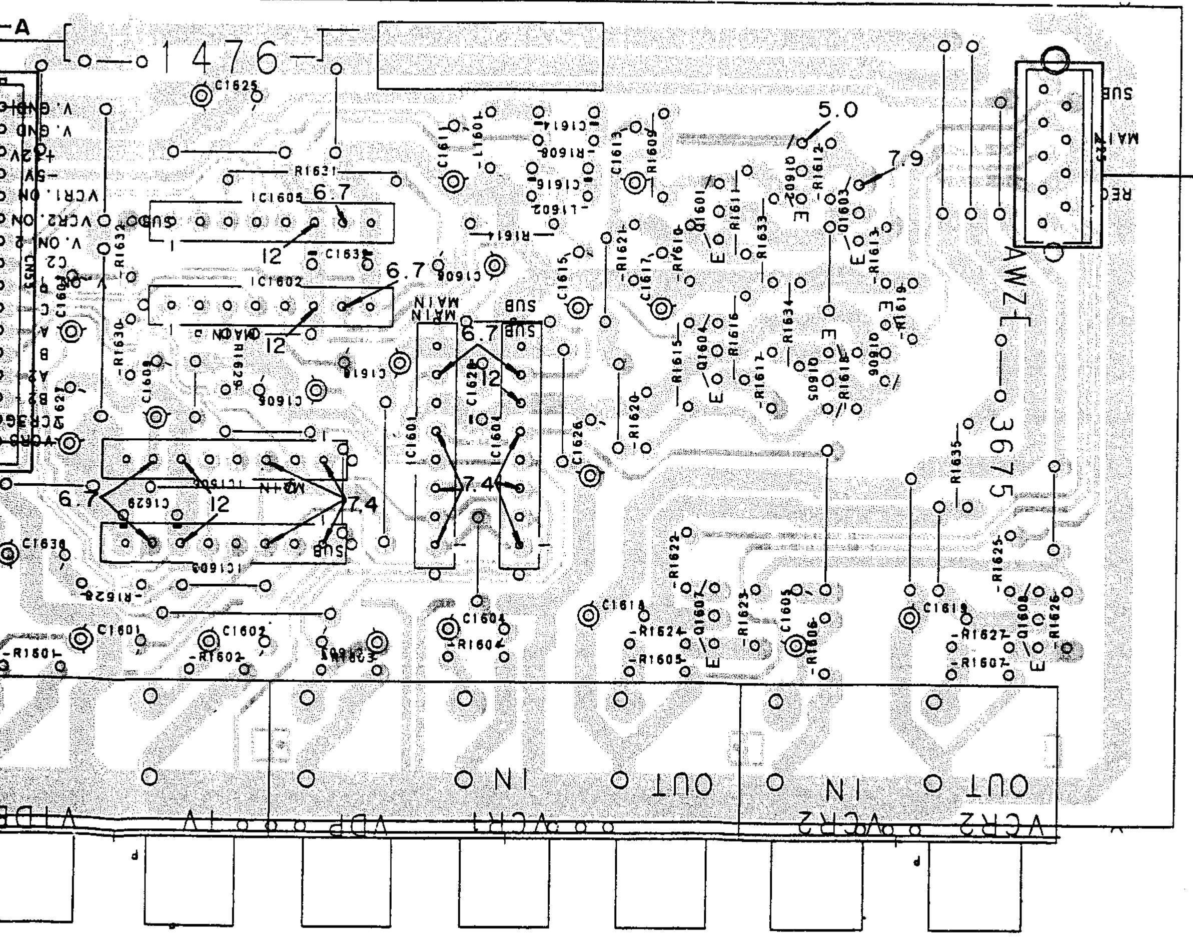


REGULATOR 1 assembly (AWZ3574)

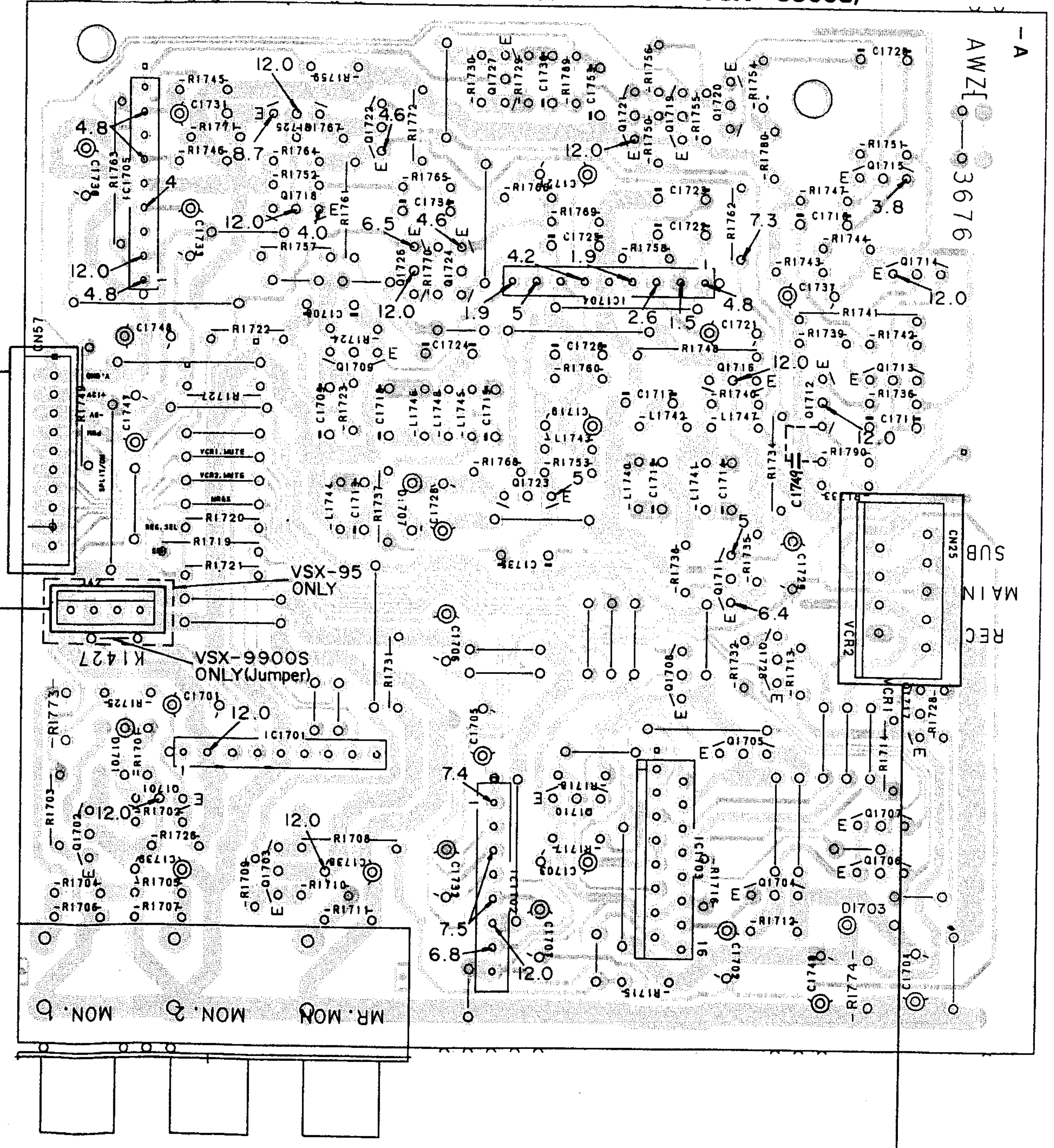
PS.U-COM assembly
CN55 (➡ P75)

To PS.U-COM assembly
CN57 (➡ P76)

DEO FUNCTION assembly (AWZ3675 : VSX−95) (AWZ3562 : VSX−9900S)



ENHANCER assembly (AWZ3676 : VSX−95)(AWZ3563 : VSX−9900S)



VSX-95 ONLY

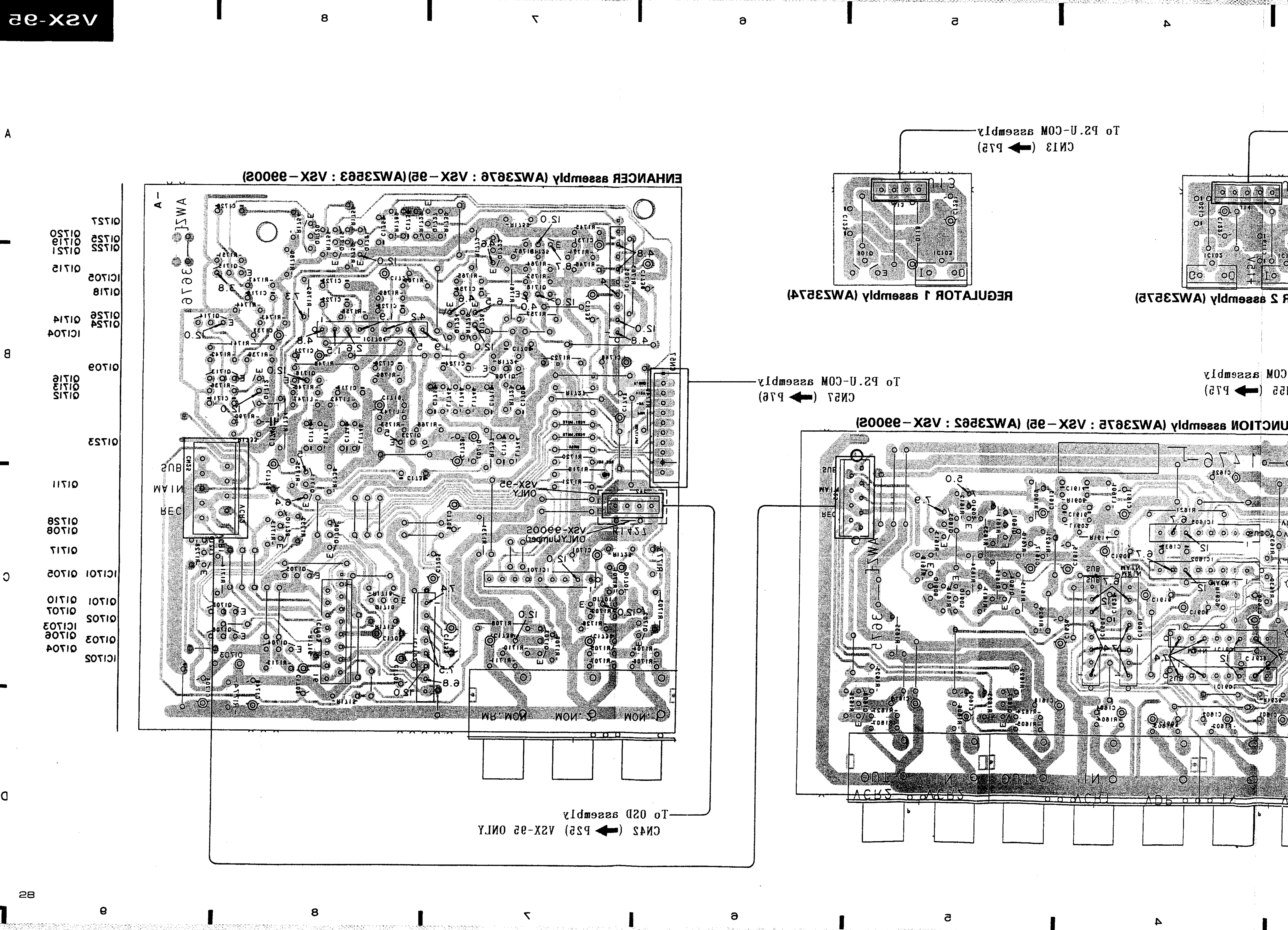
VSX-9900S ONLY(Jumper)

To OSD assembly
CN42 (➡ P25) VSX-95 ONLY

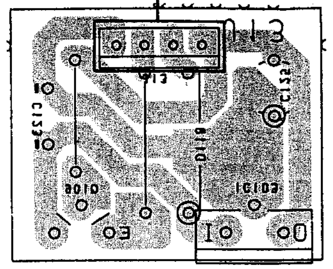
Q1727
Q1725
Q1722
IC1705
Q1718
Q1726
Q1724
Q1709
Q1723
IC1701
Q1701
Q1702
Q1703
IC1702

Q1720
Q1719
Q1721
Q1715
Q1714
IC1704
Q1716
Q1713
Q1712
Q1711
Q1728
Q1708
Q1717
Q1705
Q1710
Q1707
IC1703
Q1706
Q1704

A
B
C
D

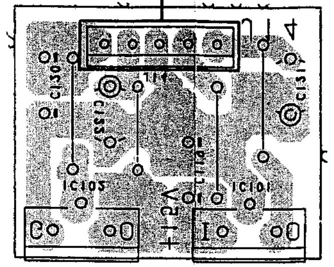

8
7
6
5
4
A
B
C
D
9
ENHANCER assembly (AWZ3676 : VSX-95)(AWZ3563 : VSX-9900S)
REGULATOR 1 assembly (AWZ3574)
R 2 assembly (AWZ3575)
UNCTION assembly (AWZ3675 : VSX-95) (AWZ3562 : VSX-9900S)
To PS.U-COM assembly
CN13 (➡ P75)
To PS.U-COM assembly
CN57 (➡ P76)
COM assembly
I55 (➡ P75)
To OSD assembly
CN42 (➡ P25) VSX-95 ONLY
VSX-95 ONLY
VSX-9900S ONLY(Jumper)
Q1727
Q1720 Q1725
Q1719 Q1722
Q1721
Q1715
IC1705
Q1718
Q1726 Q1714
Q1724 IC1704
Q1709
Q1716
Q1713
Q1712
Q1723
Q1711
Q1728
Q1708
Q1717
IC1701 Q1705
Q1701 Q1710
Q1702 Q1707
Q1703 IC1703
Q1706
IC1702 Q1704
MON. R
MON. L
MON. C
BUS
MAIN
REC
ACR2
ACR1
ADP
OUT
IN

To PS.U-COM assembly
CN13 (⬅ P75)


CN13
IC101
IC131
D108
C123

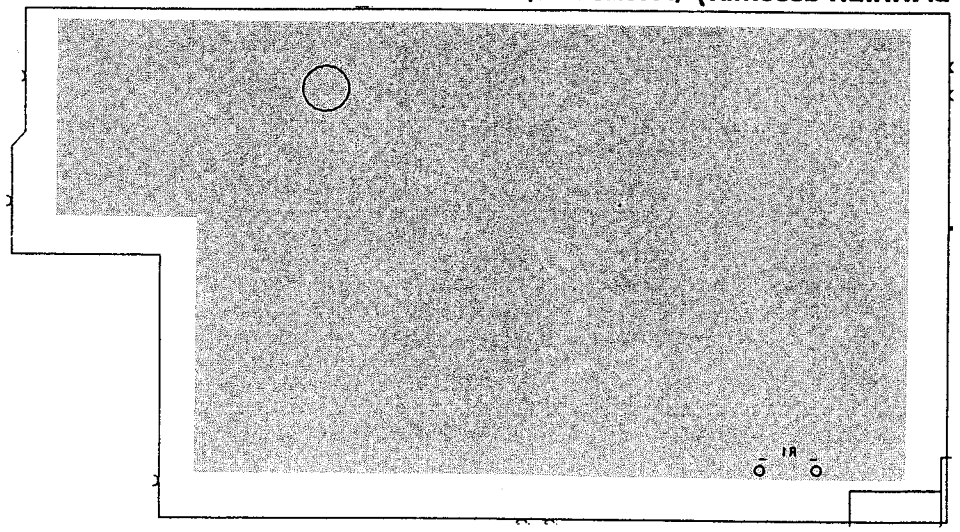
REGULATOR 1 assembly (AWZ3574)

To PS.U-COM assembly
CN14 (⬅ P76)

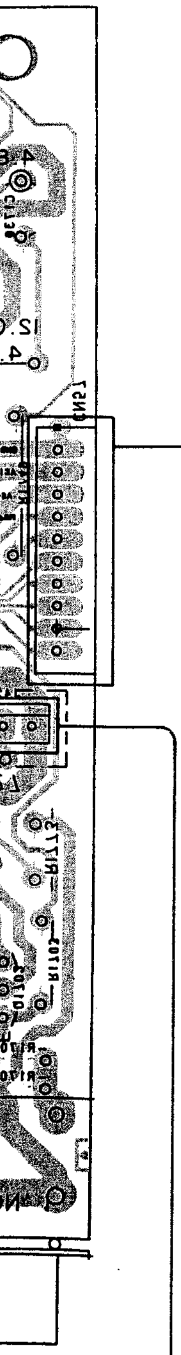

CN14
IC101
IC102
C130
C131

REGULATOR 2 assembly (AWZ3575)

BARRIER assembly (AWZ3825)



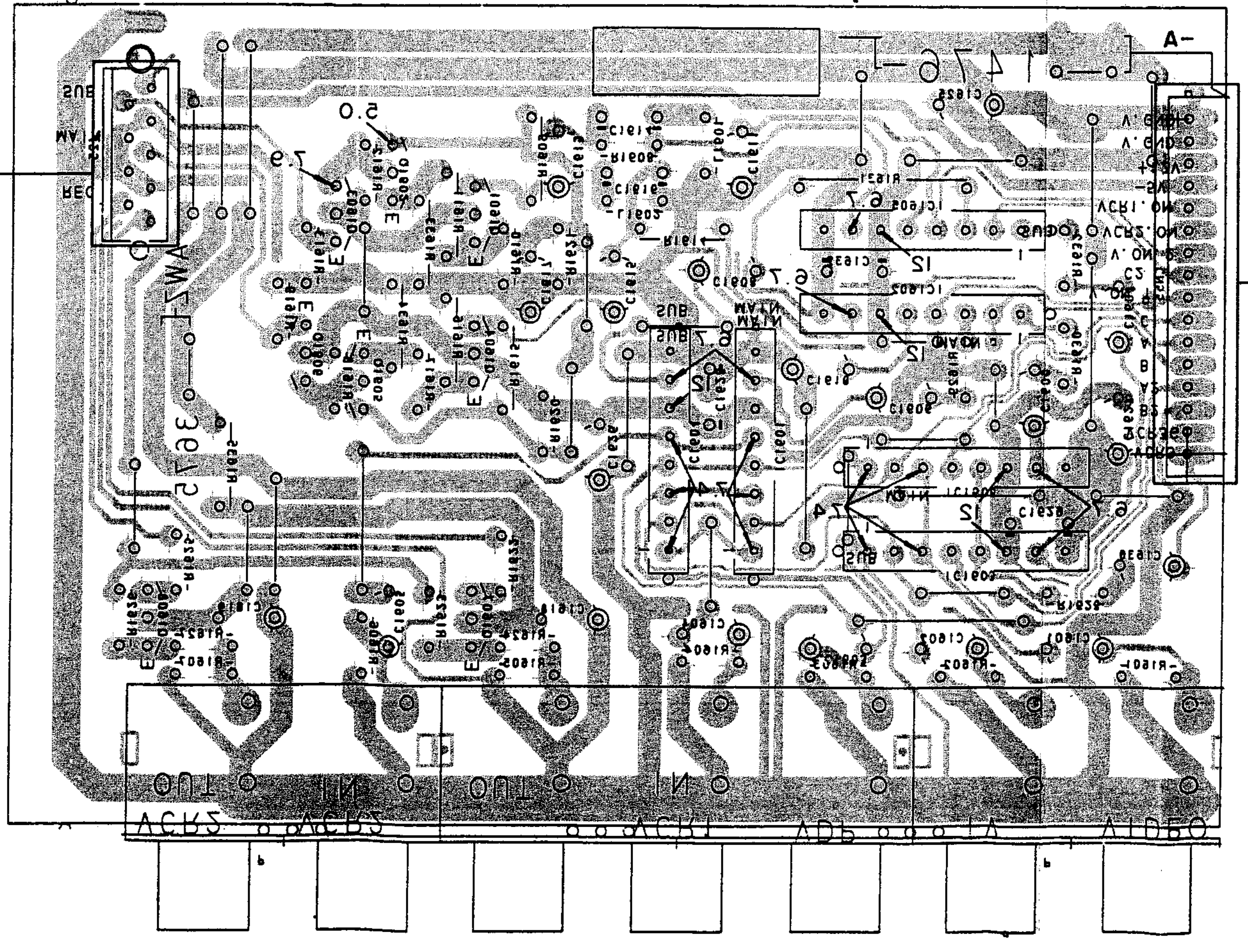
ENHAN



To PS.U-COM assembly
CN57 (⬅ P76)

To PS.U-COM assembly
CN55 (⬅ P75)

VIDEO FUNCTION assembly (AWZ3675 : VSX−95) (AWZ3562 : VSX−9900S)


A−
BUS
MVWI
REC
IC1601
IC1602
IC1603
IC1604
VIDEO
A1
VCR1
VCR2
VCR3
OUT
IN

To OS
CN4

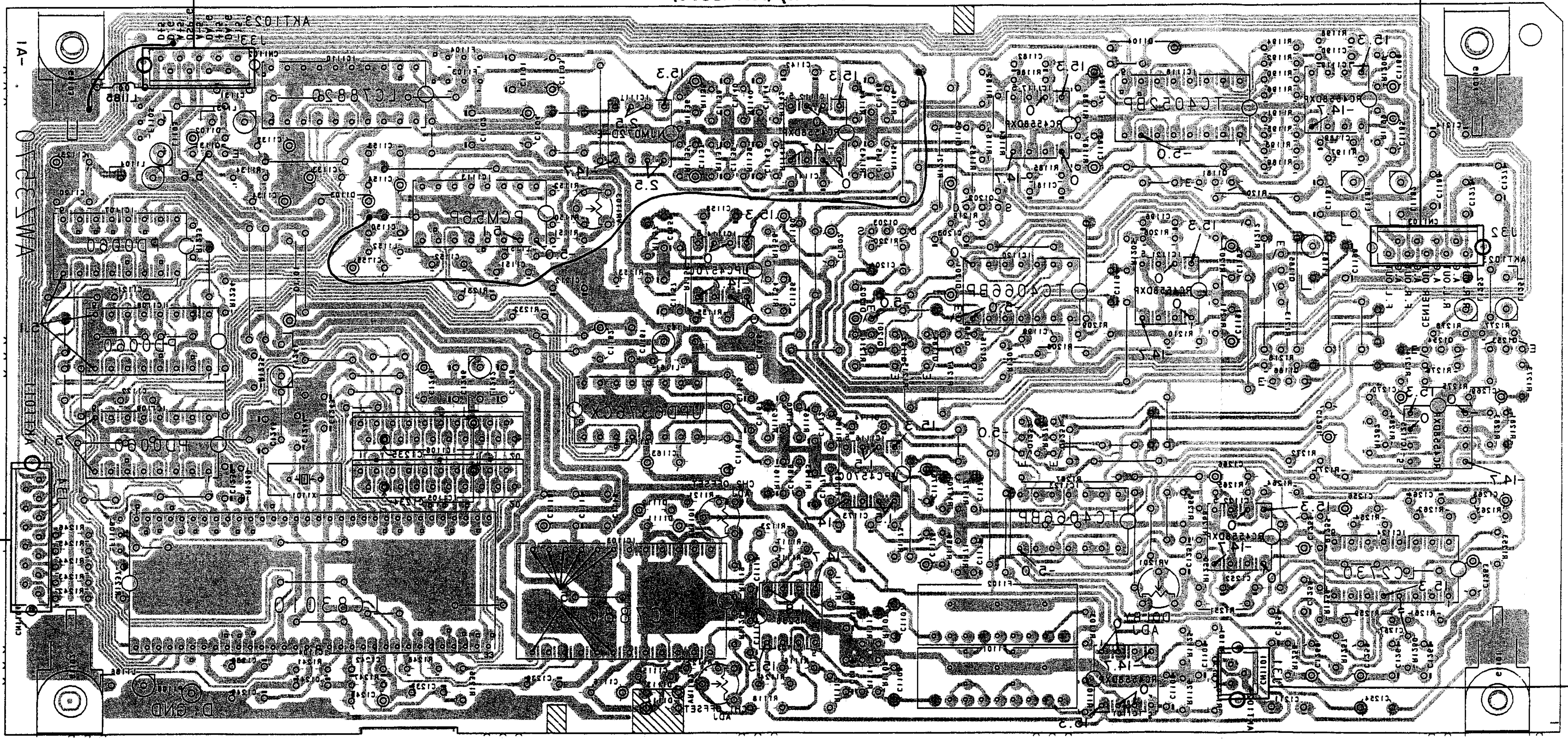
A

To PS.U-COM assembly
CN33 (⬅ P76)

To PS.U-COM assembly
CN32 (⬅ P75)

DSP assembly (AWZ3570)

B


AKT1023
J33
AKT1023
J32
PCM56P
PD0060
LC7882
TC4052BP
TC4066BP
NJM4558DXR
uPC4570
C2730
DOLBY ADJ
D-GND
OFFSET ADJ
CENTER
15.3
-14.7
-5.0
5.0
2.5

C

VR1201
VR1101 VR1102 VR1103

IC1119 Q1181 IC1118 IC1117 Q1202 Q1203 IC1112 IC1114 IC1111 IC1113 IC1110 Q1131 IC1107

Q1253 Q1254 IC1125 Q1186 Q1185 IC1121 Q1251 Q1252 IC1120 Q1182-Q1184 Q1201 IC1115 IC1106 IC1108 IC1109

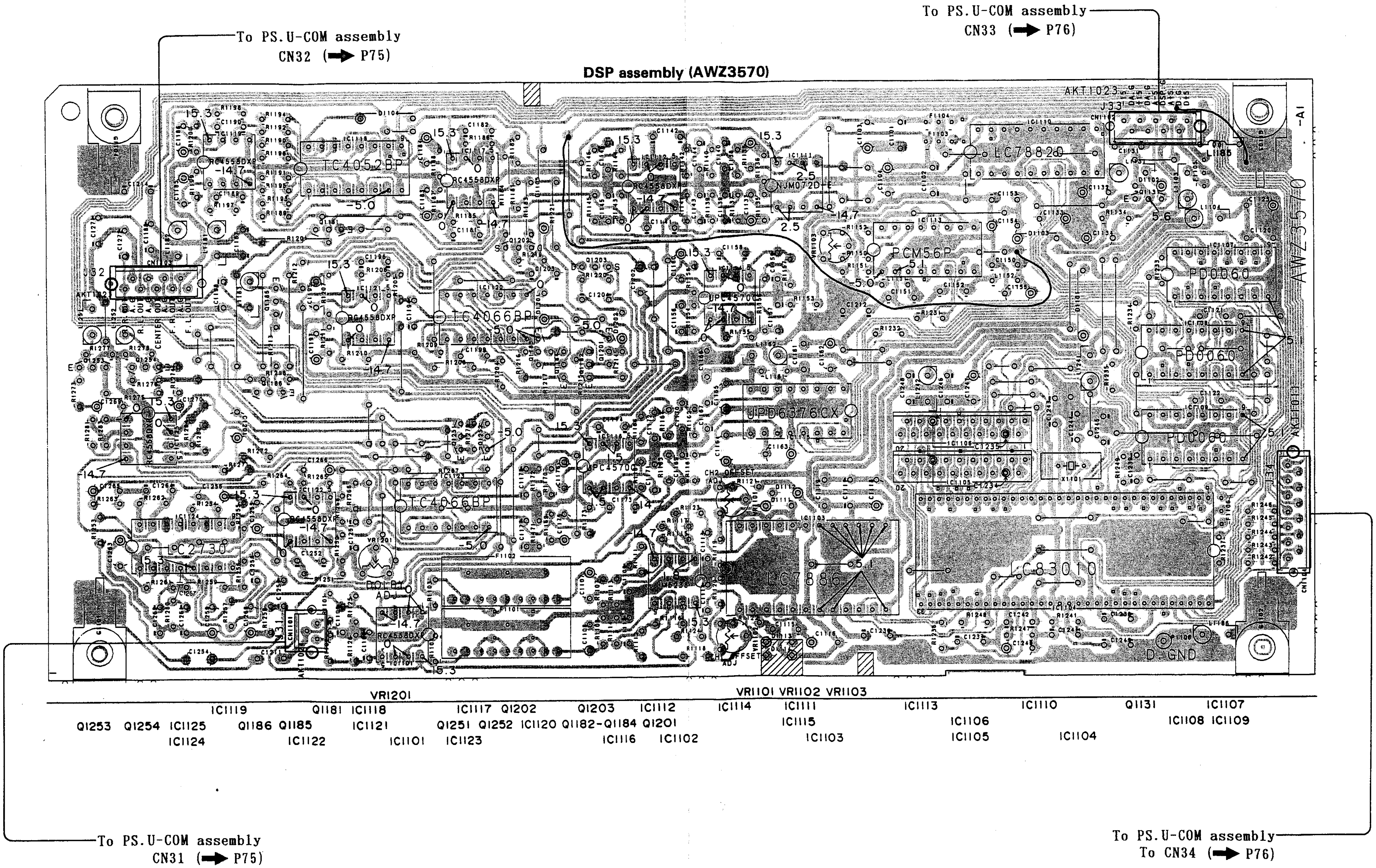
IC1124 IC1122 IC1101 IC1123 IC1116 IC1102 IC1103 IC1105 IC1104

D

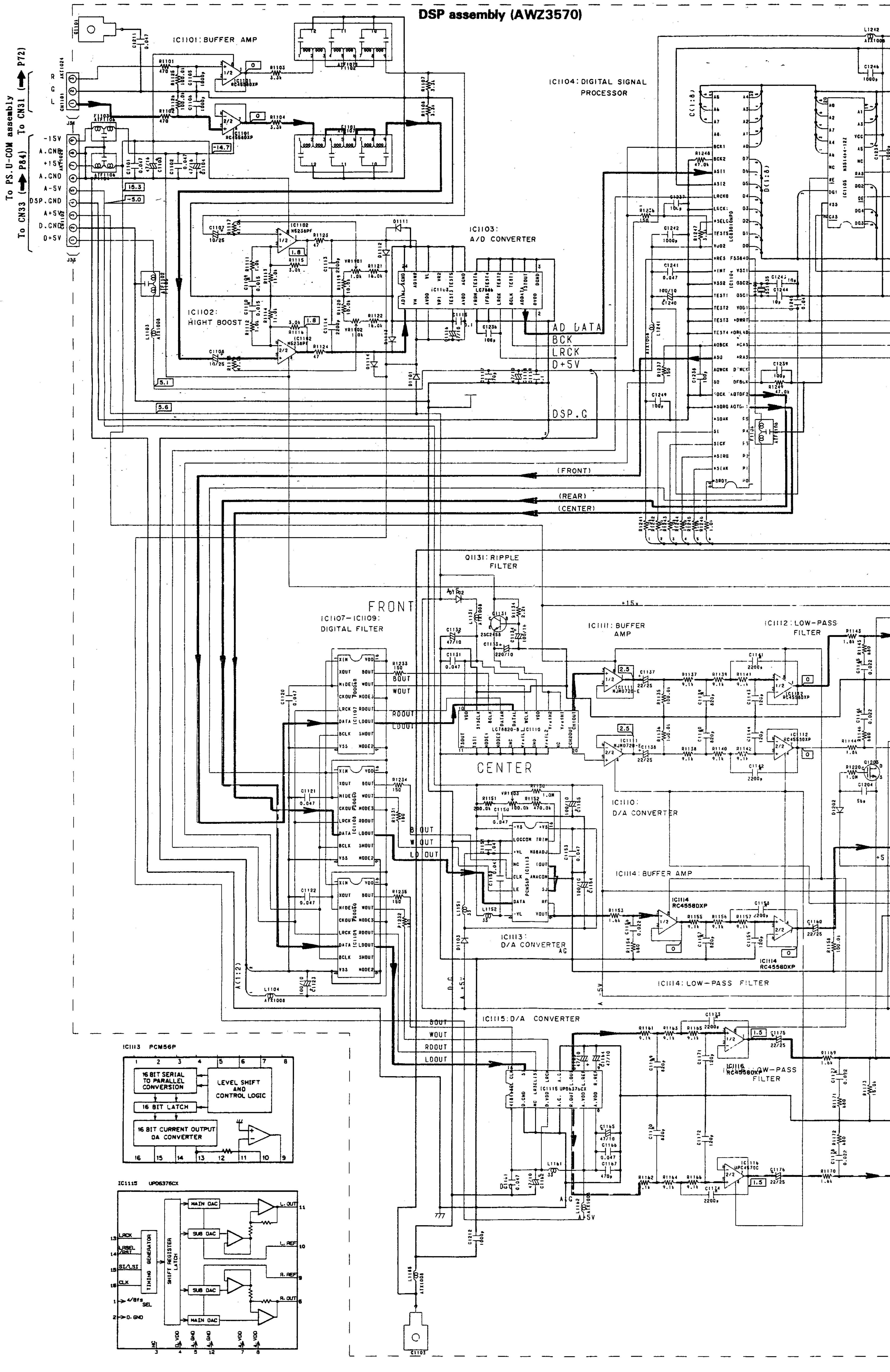
To PS.U-COM assembly
CN31 (⬅ P75)

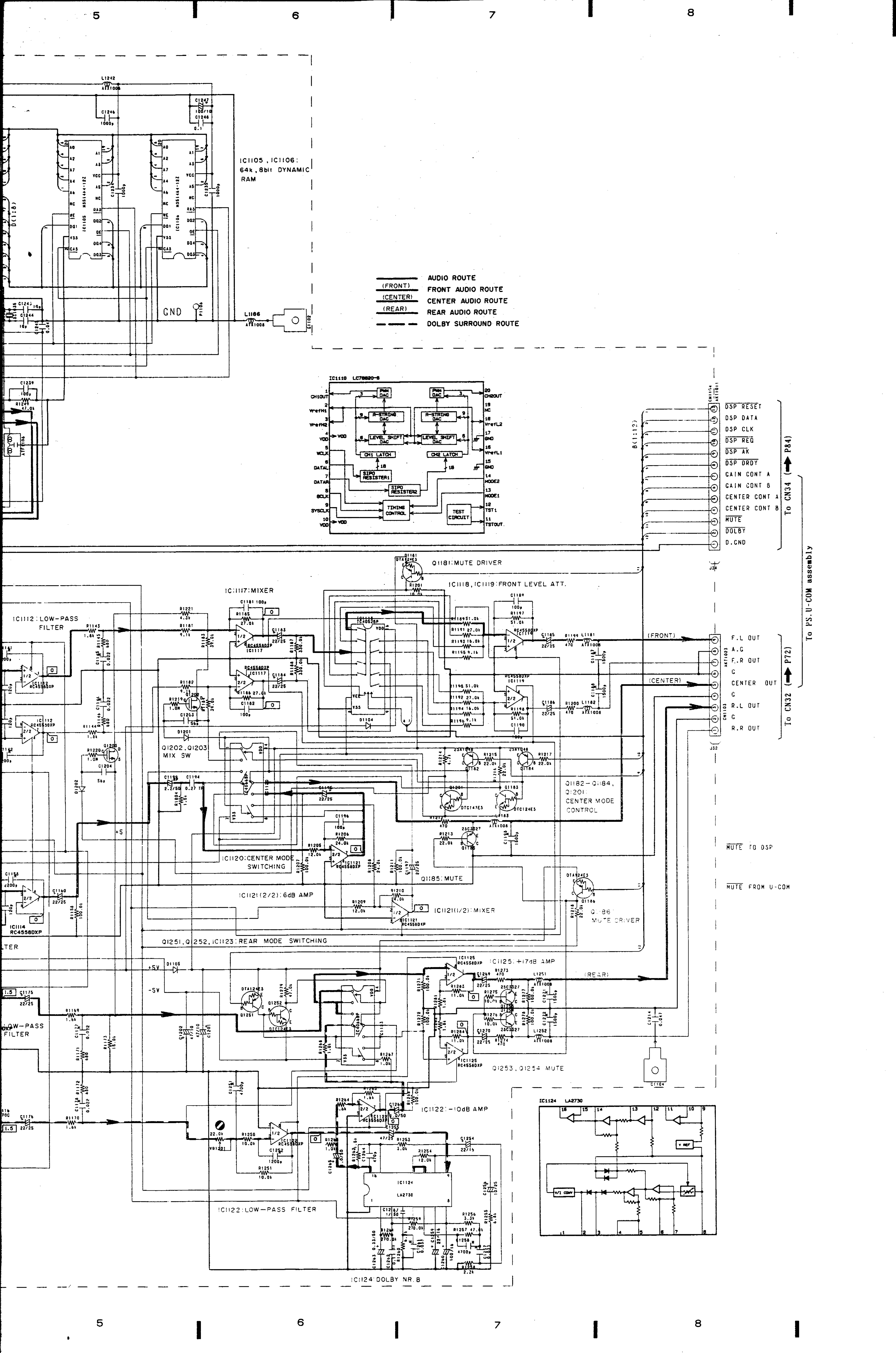
To PS.U-COM assembly
To CN34 (⬅ P76)

3.4 DSP assembly (AWZ3570)

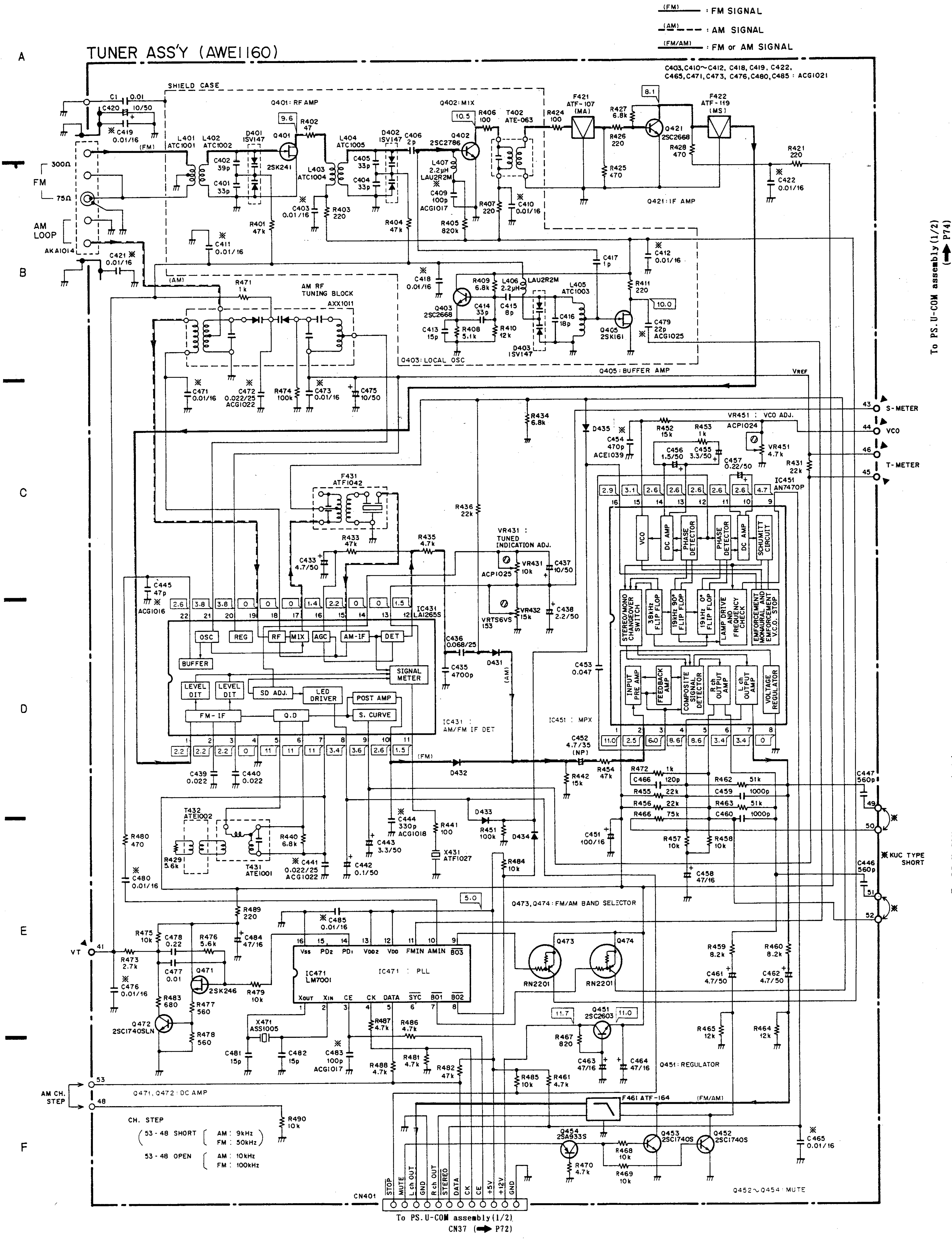

DSP assembly (AWZ3570)
To PS.U-COM assembly
CN32 (➡ P75)
To PS.U-COM assembly
CN33 (➡ P76)
To PS.U-COM assembly
CN31 (➡ P75)
To PS.U-COM assembly
To CN34 (➡ P76)
TC4052BP
RC4558DXP
NJM072D-E
LC78820
PCM56P
PD0060
TC4066BP
UPC4570C
UPD6376CX
LC7886
LC83010
LC2730
J32
J33
J34
AKT1023
AWZ3570
D.GND
DOLBY ADJ
CH2 OFFSET ADJ
CH1 OFFSET ADJ
VR1201
VR1101 VR1102 VR1103
IC1119
Q1253 Q1254 IC1125
IC1124
Q1186 Q1185
IC1122
Q1181 IC1118
IC1121
IC1101
IC1117 Q1202
Q1251 Q1252 IC1120
IC1123
Q1203
Q1182-Q1184
IC1116
IC1112
Q1201
IC1102
IC1114
IC1111
IC1115
IC1103
IC1113
IC1106
IC1105
IC1110
IC1104
Q1131
IC1107
IC1108 IC1109

DSP assembly (AWZ3570)

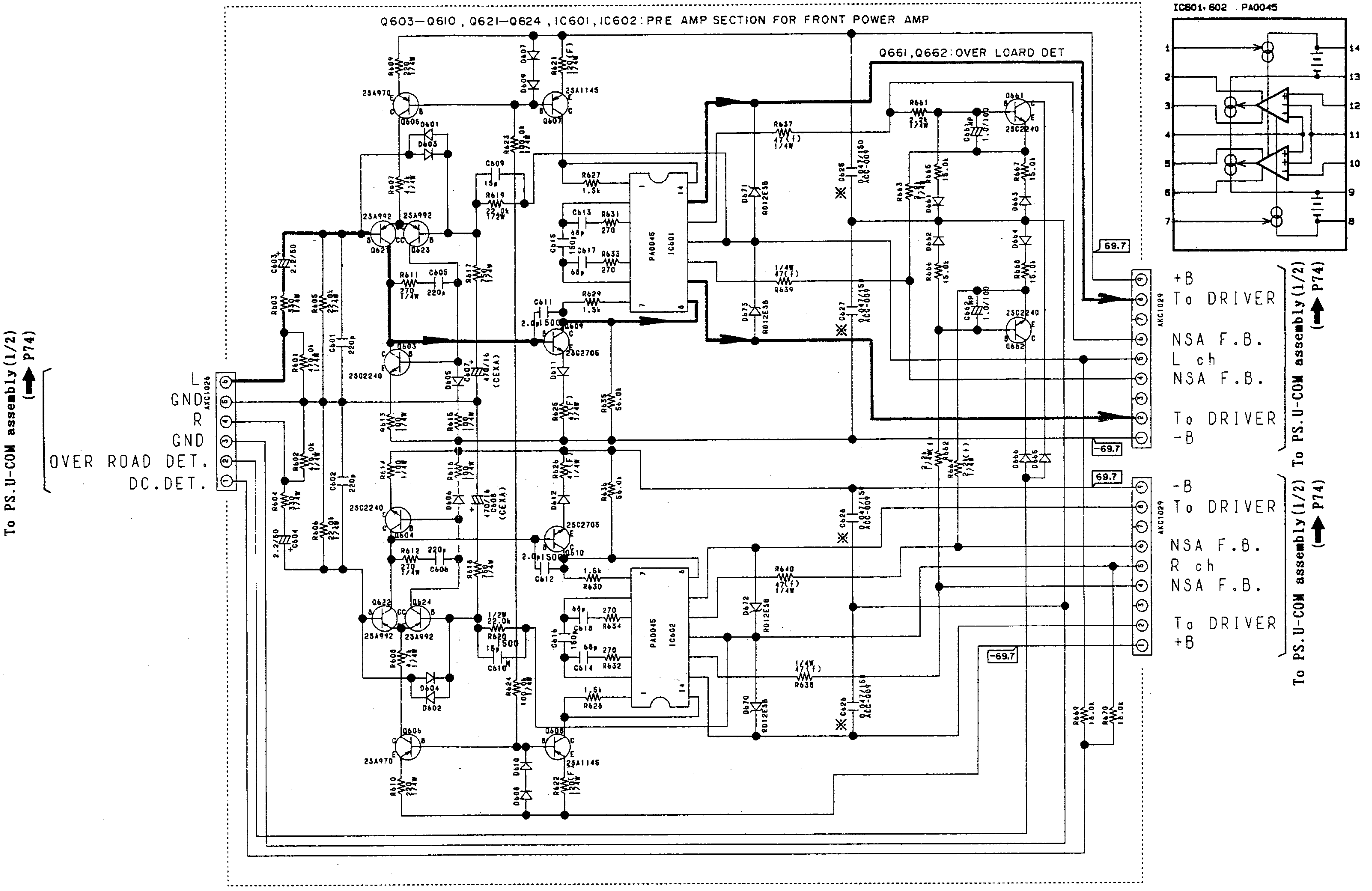

A
B
C
D
E
F
To PS.U-COM assembly
To CN31 (→ P72)
To CN33 (→ P84)
R
G
L
-15V
A.GND
+15V
A.GND
A-5V
DSP.GND
A+5V
D.GND
D+5V
15.3
-5.0
-14.7
5.1
5.6
IC1101: BUFFER AMP
RC4560XP
IC1102: HIGHT BOOST
NJM5238PF
IC1103: A/D CONVERTER
LC7886
IC1104: DIGITAL SIGNAL PROCESSOR
LC8300HPD
MB81464-12Z
IC1106
AD DATA
BCK
LRCK
D+5V
DSP.G
(FRONT)
(REAR)
(CENTER)
Q1131: RIPPLE FILTER
2SC2458
+15V
FRONT
IC1107-IC1109: DIGITAL FILTER
BOUT
WOUT
RDOUT
LDOUT
IC1111: BUFFER AMP
NJM072B-E
IC1112: LOW-PASS FILTER
RC4558DXP
IC1110: D/A CONVERTER
LC78820-B
CENTER
IC1113: D/A CONVERTER
PCM56P
IC1114: BUFFER AMP
RC4558DXP
IC1114: LOW-PASS FILTER
IC1115: D/A CONVERTER
UPD6376CX
IC1116: LOW-PASS FILTER
UPC4570C
RC4558DXP
A(1:2)
D.G
A+5V
A-5V
AG
A+5V
IC1113 PCM56P
16 BIT SERIAL TO PARALLEL CONVERSION
LEVEL SHIFT AND CONTROL LOGIC
16 BIT LATCH
16 BIT CURRENT OUTPUT DA CONVERTER
IC1115 UPD6376CX
LRCK
LRSEL/DST
SI/LSI
CLK
4/8fs SEL
D.GND
TIMING GENERATOR
SHIFT REGISTER LATCH
MAIN DAC
SUB DAC
L.OUT
L.REF
R.REF
R.OUT
NC
D.VDD
D.GND
A.GND
A.VDD
C1101
C1103


5
6
7
8
IC1105 , IC1106 :
64k , 8bit DYNAMIC
RAM
GND
L1186
ATX1008
AUDIO ROUTE
(FRONT) FRONT AUDIO ROUTE
(CENTER) CENTER AUDIO ROUTE
(REAR) REAR AUDIO ROUTE
DOLBY SURROUND ROUTE
IC1110 LC78820-8
CH1OUT
VrefH1
VrefH2
VDD
WCLK
DATAL
DATAR
BCLK
SYSCLK
CH2OUT
NC
VrefL2
GND
VrefL1
MODE2
MODE1
TST1
TSTOUT
PWM DAC
R-STRING DAC
LEVEL SHIFT DAC
CH1 LATCH
CH2 LATCH
SIPO RESISTER1
SIPO RESISTER2
TIMING CONTROL
TEST CIRCUIT
B(1:12)
DSP RESET
DSP DATA
DSP CLK
DSP REQ
DSP AK
DSP ORDY
GAIN CONT A
GAIN CONT B
CENTER CONT A
CENTER CONT B
MUTE
DOLBY
D.GND
To CN34 (⬆ P84)
To PS.U-COM assembly
Q1181:MUTE DRIVER
IC1118, IC1119:FRONT LEVEL ATT.
IC1117:MIXER
IC1112:LOW-PASS FILTER
(FRONT)
(CENTER)
F.L OUT
A.G
F.R OUT
G
CENTER OUT
G
R.L OUT
G
R.R OUT
To CN32 (⬆ P72)
Q1202, Q1203 MIX SW
Q1182-Q1184, Q1201 CENTER MODE CONTROL
IC1120:CENTER MODE SWITCHING
Q1185:MUTE
MUTE TO DSP
MUTE FROM U-COM
IC1121(2/2):6dB AMP
IC1121(1/2):MIXER
Q1186 MUTE DRIVER
IC1114 RC4558DXP
Q1251, Q1252, IC1123:REAR MODE SWITCHING
+5V
-5V
D1105
IC1125:+17dB AMP
(REAR)
LOW-PASS FILTER
Q1253, Q1254 MUTE
C1104
IC1122:-10dB AMP
VR1201
IC1124 LA2730
IC1122:LOW-PASS FILTER
IC1124:DOLBY NR.B
V/I CONV
V REF
5
6
7
8
9

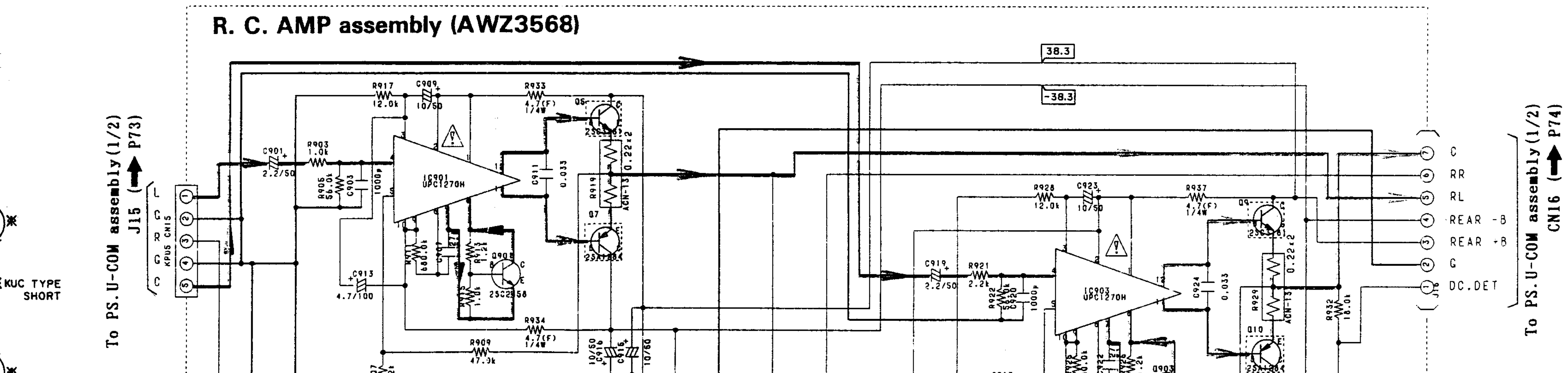
3.5 TUNER (AWE1160), FRONT AMP (AWH1014) and R. C. AMP assembly (AWZ3568)

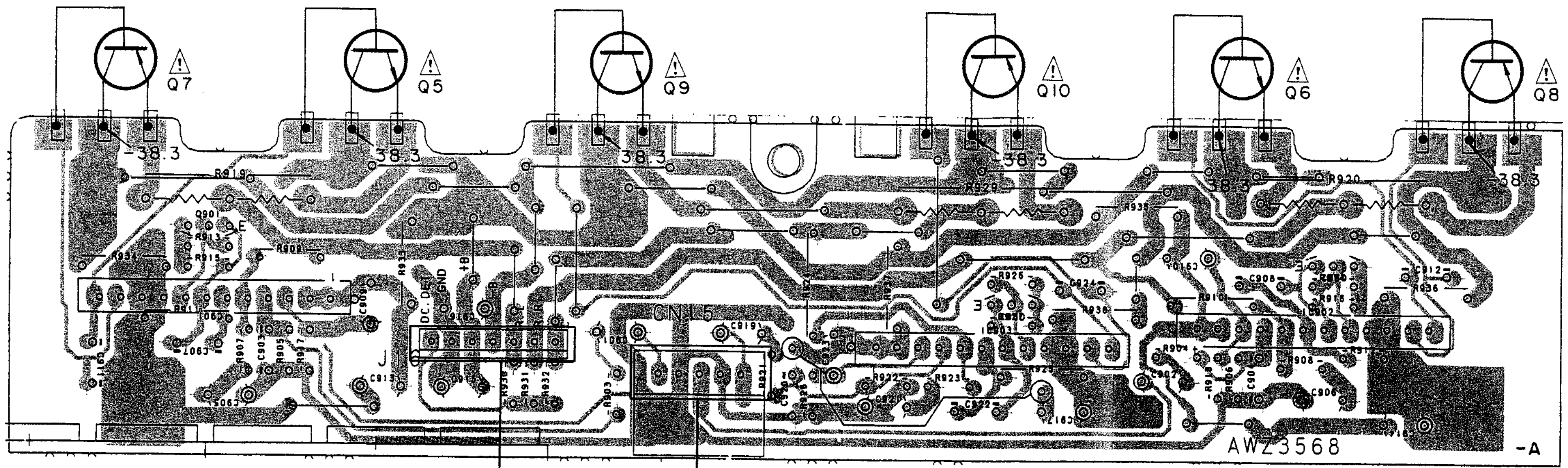

(FM) : FM SIGNAL
(AM) : AM SIGNAL
(FM/AM) : FM or AM SIGNAL
TUNER ASS'Y (AWE1160)
C403, C410~C412, C418, C419, C422, C465, C471, C473, C476, C480, C485 : ACG1021
SHIELD CASE
Q401: RF AMP
Q402: MIX
Q421: IF AMP
Q403: LOCAL OSC
Q405: BUFFER AMP
FM
300Ω
75Ω
AM LOOP
AKA1014
AM RF TUNING BLOCK AXX1011
F421 ATF-107 (MA)
F422 ATF-119 (MS)
T402 ATE-063
2SK241
2SC2786
2SC2668
2SK161
1SV147
LAU2R2M
F431 ATF1042
VR431 : TUNED INDICATION ADJ.
ACP1025
VRTS6VS 153
VR451 : VCO ADJ.
ACP1024
IC431 LA1265S
IC431 : AM/FM IF DET
OSC
REG
RF
MIX
AGC
AM-IF
DET
BUFFER
SIGNAL METER
LEVEL DIT
SD ADJ.
LED DRIVER
POST AMP
FM-IF
Q.D
S. CURVE
IC451 AN7470P
IC451 : MPX
VCO
DC AMP
PHASE DETECTOR
SCHUMITT CIRCUIT
STEREO/MONO CHANGEOVER SWITCH
38kHz FLIP FLOP
19kHz 90° FLIP FLOP
19kHz 0° FLIP FLOP
LAMP DRIVE AND FREQUENCY CHECK
EMFORCEMENT MONAURAL AND EMFORCEMENT V.C.O. STOP
INPUT PRE AMP
FEEDBACK AMP
COMPOSITE SIGNAL DETECTOR
R ch OUTPUT AMP
L ch OUTPUT AMP
VOLTAGE REGULATOR
T432 ATE1002
T431 ATE1001
X431 ATF1027
D431
D432
D433
D434
D435
43 S-METER
44 VCO
46 T-METER
45
VREF
KUC TYPE SHORT
Q473, Q474 : FM/AM BAND SELECTOR
Q473
Q474
RN2201
IC471 LM7001
IC471 : PLL
Vss PD2 PD1 VDD2 VDD FMIN AMIN BO3
XOUT XIN CE CK DATA SYC BO1 BO2
X471 ASS1005
Q471
2SK246
Q472
2SC1740SLN
VT 41
Q471, Q472 : DC AMP
AM CH. STEP
53
48
CH. STEP
53-48 SHORT (AM : 9kHz FM : 50kHz)
53-48 OPEN (AM : 10kHz FM : 100kHz)
Q451 2SC2603
Q451 : REGULATOR
F461 ATF-164
Q454 2SA933S
Q453 2SC1740S
Q452 2SC1740S
Q452~Q454 : MUTE
CN401
STOP MUTE L ch OUT GND R ch OUT STEREO DATA CK CE +5V +12V GND
To PS. U-COM assembly (1/2) CN37 (➡ P72)
To PS. U-COM assembly (1/2) (➡ P74)
A
B
C
D
E
F
1
2
3
4
5

FRONT AMP assembly (AWH1014)


Q603—Q610, Q621—Q624, IC601, IC602: PRE AMP SECTION FOR FRONT POWER AMP
Q661, Q662: OVER LOARD DET
IC601, 602 : PA0045
PA0045
IC601
IC602
AKC1026
AKC1029
L
GND
R
GND
OVER ROAD DET.
DC.DET.
To PS.U-COM assembly(1/2) (⬆ P74)
69.7
-69.7
+B
To DRIVER
NSA F.B.
L ch
NSA F.B.
To DRIVER
-B
-B
To DRIVER
NSA F.B.
R ch
NSA F.B.
To DRIVER
+B
2SA970
2SA992
2SC2240
2SC2706
2SC2705
2SA1145
RD12E3B
S-METER
VCO
T-METER

R. C. AMP assembly (AWZ3568)


To PS.U-COM assembly(1/2) J15 (⬆ P73)
KPU5 CN15
L
G
R
G
C
KUC TYPE SHORT
38.3
-38.3
IC901 UPC1270H
IC902 UPC1270H
IC903 UPC1270H
IC901, Q901, Q5, Q7: REAR POWER AMP
IC902, Q902, Q6, Q8 REAR POWER AMP
IC903, Q903, Q9, Q10: CENTER POWER AMP
2SC2458
ACN-13
C
RR
RL
REAR -B
REAR -B
G
DC.DET
To PS.U-COM assembly(1/2) CN16 (⬆ P74)


Q7
Q5
Q9
Q10
Q6
Q8
-38.3
38.3
CN15
DC DET
AWZ3568
-A

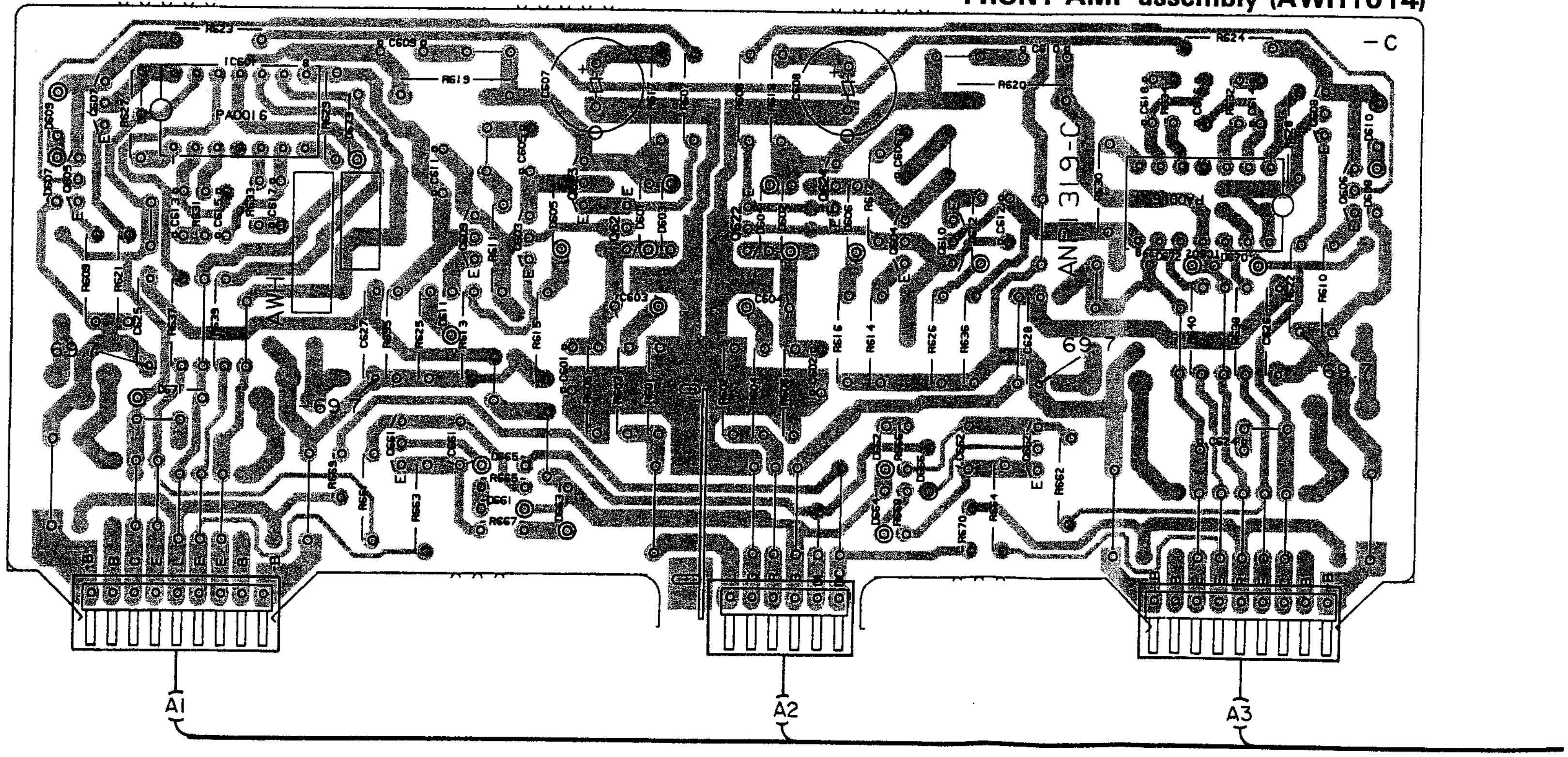
R. C. AMP assembly (AWZ3568)

To PS.U-COM assembly CN16 (➡ P76)

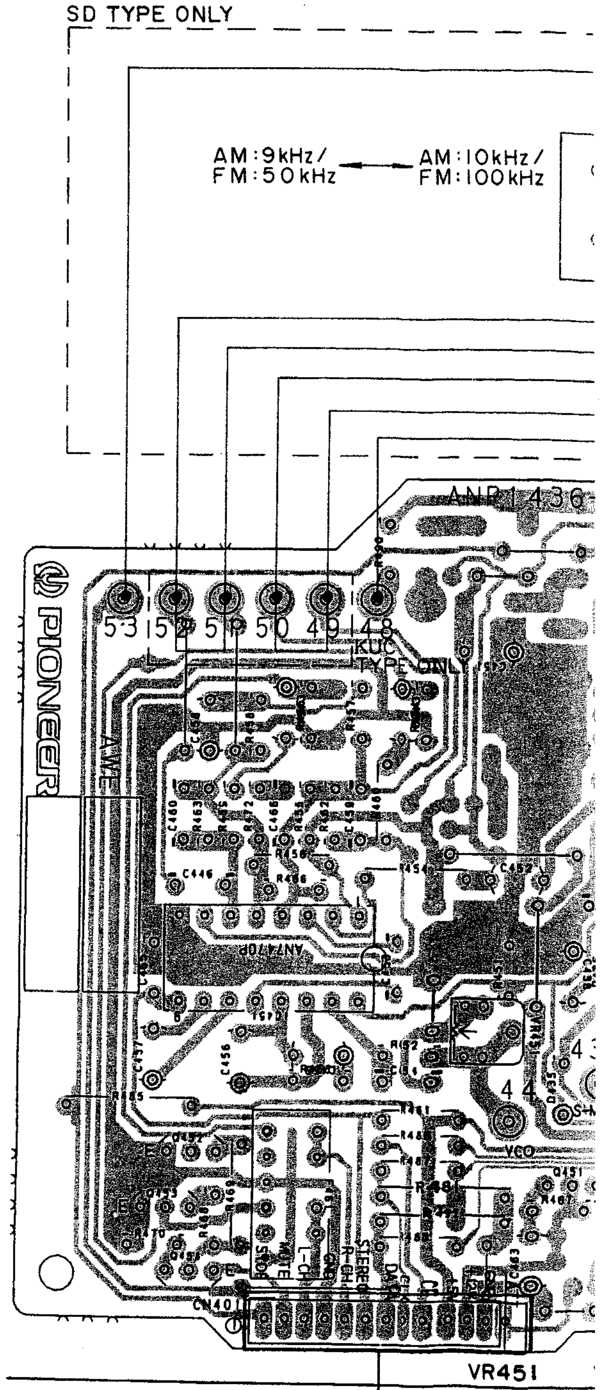
To PS.U-COM assembly J15 (➡ P76)

Q605 Q607 IC601 Q609 Q603 Q623 Q621 Q622 Q624 Q604 Q610 IC602 Q608 Q606
Q661 Q662

FRONT AMP assembly (AWH1014)

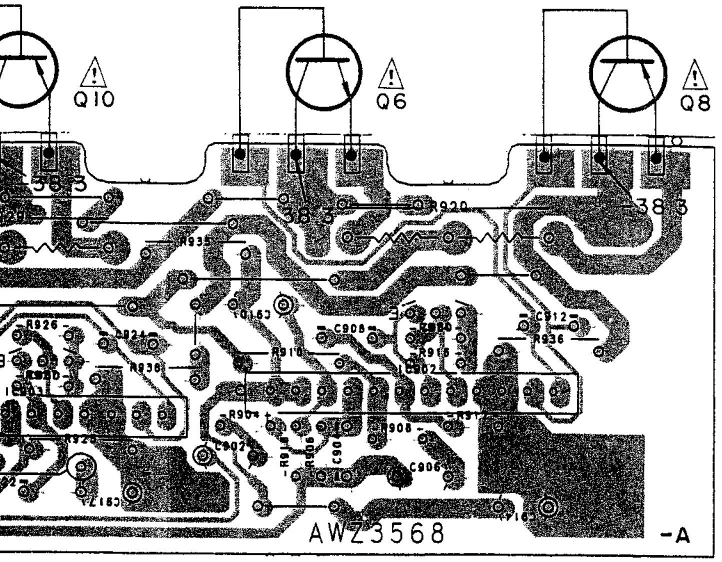

-C
IC601
PA0016
ANP1319-C
A1
A2
A3

To PS.U-COM assembly
B,D,F (➡ P75,P76)


SD TYPE ONLY
AM:9kHz/ FM:50kHz
AM:10kHz/ FM:100kHz
ANP1436
PIONEER
53 52 51 50 49 48
KUC TYPE ONLY
AN7410P
CN401
VCO
STEREO
VR451

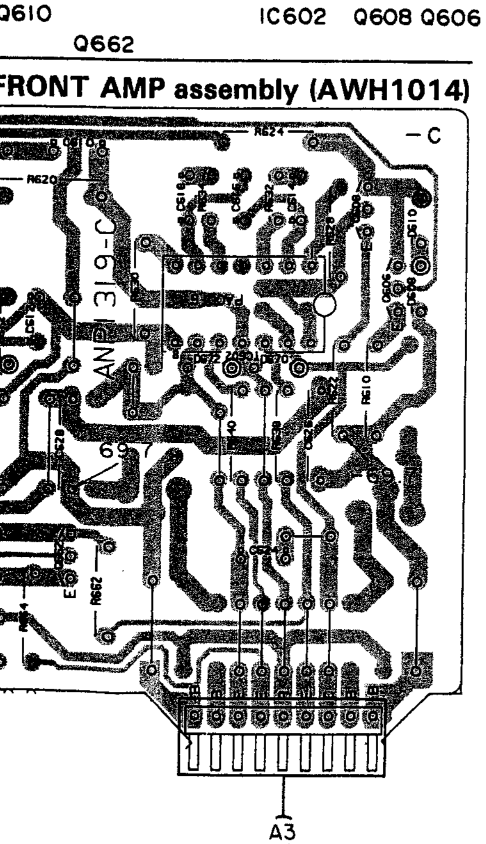
IC451
Q453 Q452 Q454
Q45

To PS.U-COM assembly
CN37 (➡ P75)


Q10
Q6
Q8
AWZ3568
-A

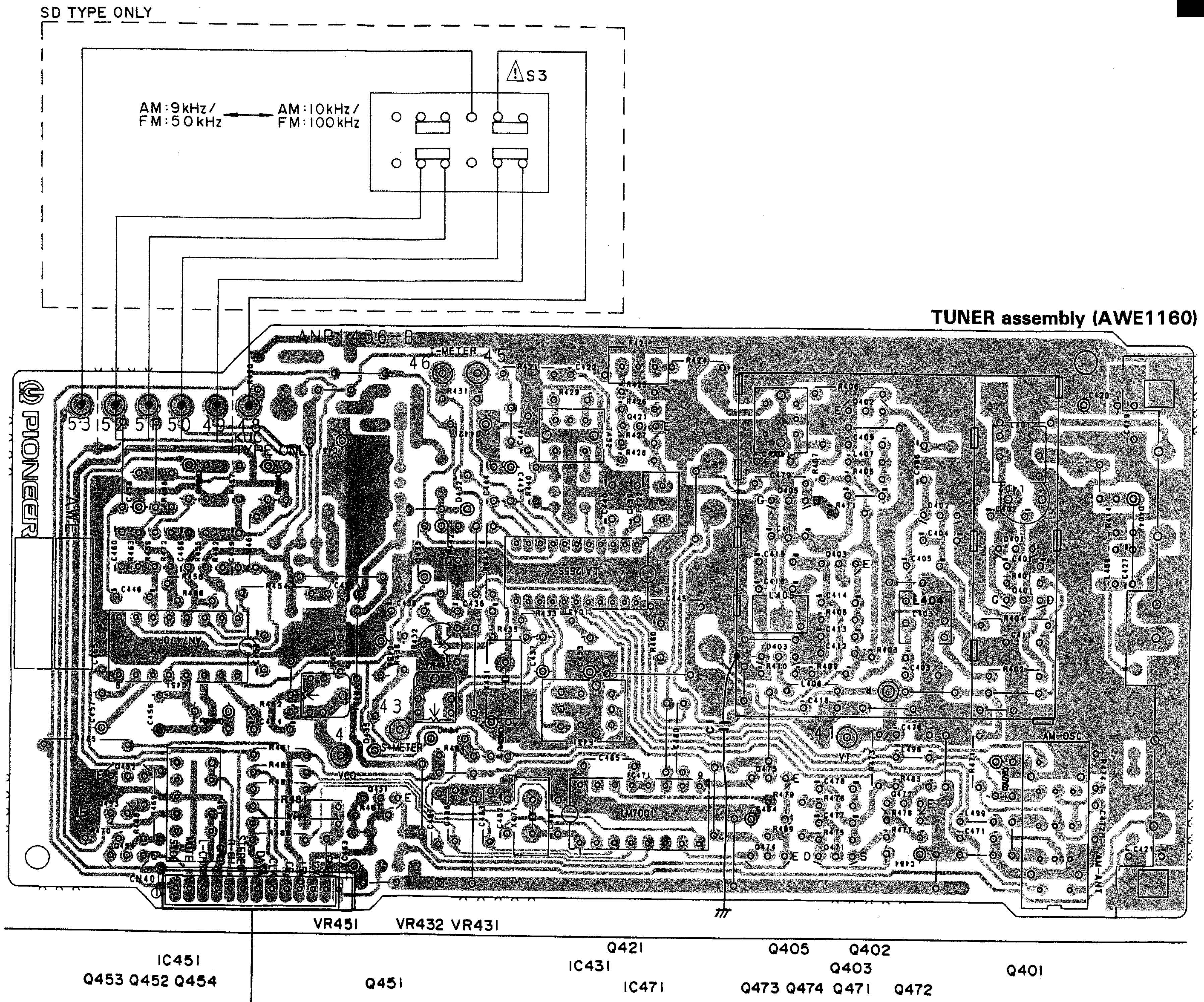
R. C. AMP assembly (AWZ3568)

sembly
➡ P76)


Q610
Q662
IC602 Q608 Q606
-C
ANP1319-C
A3

FRONT AMP assembly (AWH1014)

To PS.U-COM assembly
B,D,F (➡ P75,P76)

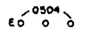
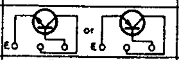
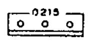
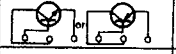
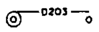
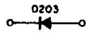
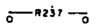
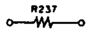
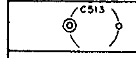
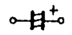
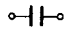

SD TYPE ONLY
S3
AM:9kHz/
FM:50kHz
AM:10kHz/
FM:100kHz
ANP1436-B
PIONEER
AWE
53 52 51 50 49 48
46 45
T-METER
43
S-METER
41
CN401
VR451 VR432 VR431
IC451
Q453 Q452 Q454
Q451
Q421
IC431
IC471
Q405 Q402
Q403
Q473 Q474 Q471 Q472
Q401
AM-OSC
AM-ANT

TUNER assembly (AWE1160)

To PS.U-COM assembly
CN37 (➡ P75)

NOTE

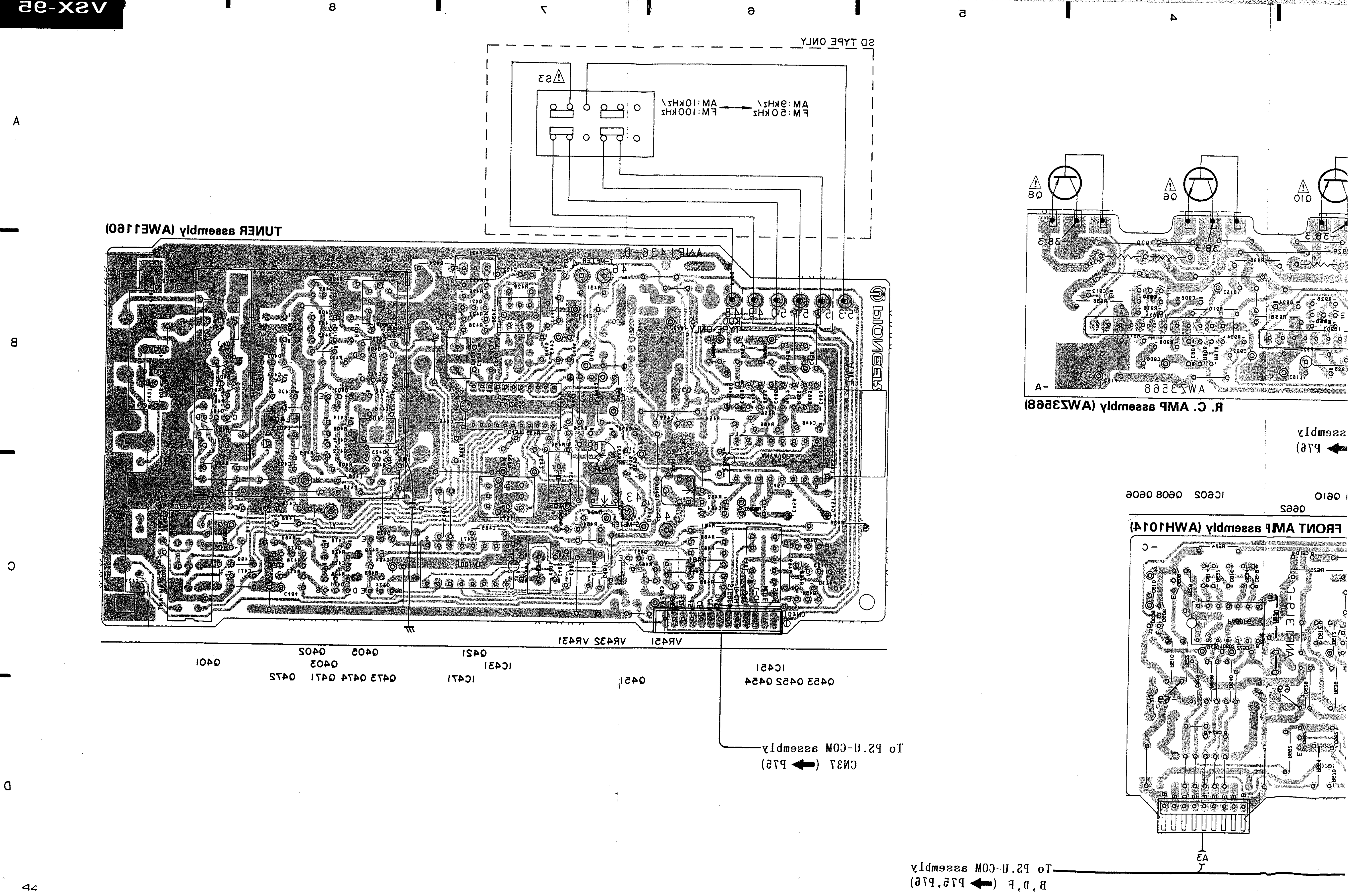
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

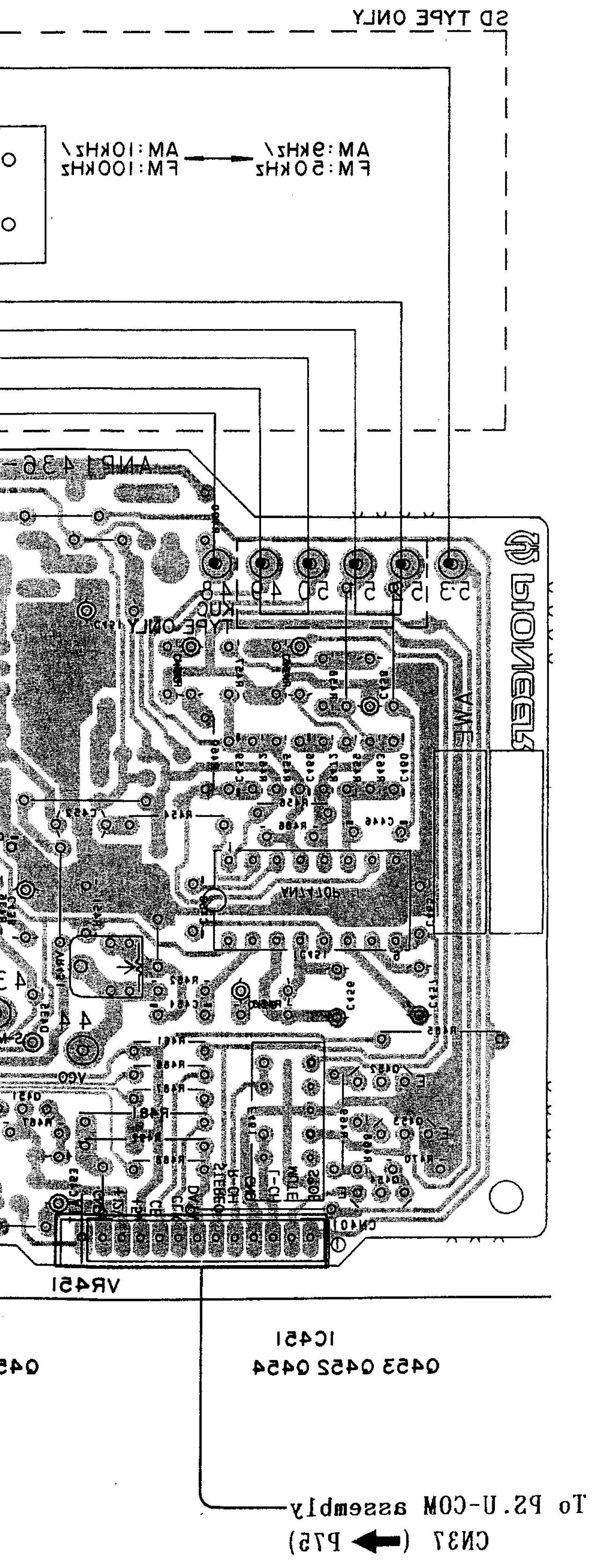
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
 0504		Transistor
 0215		Radiator type transistor
 0203	 0203	Diode
 R237	 R237	Resistor
 C513		Capacitor (Polarity)
C518		Capacitor (Non-polarity)

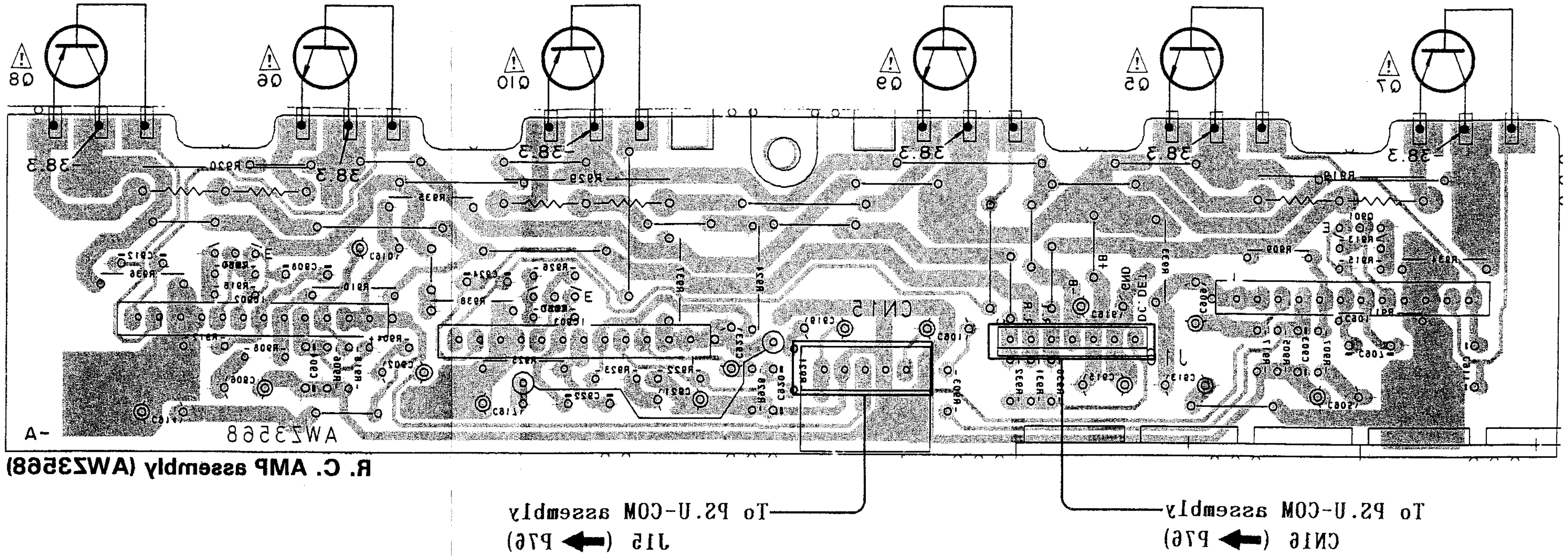
Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

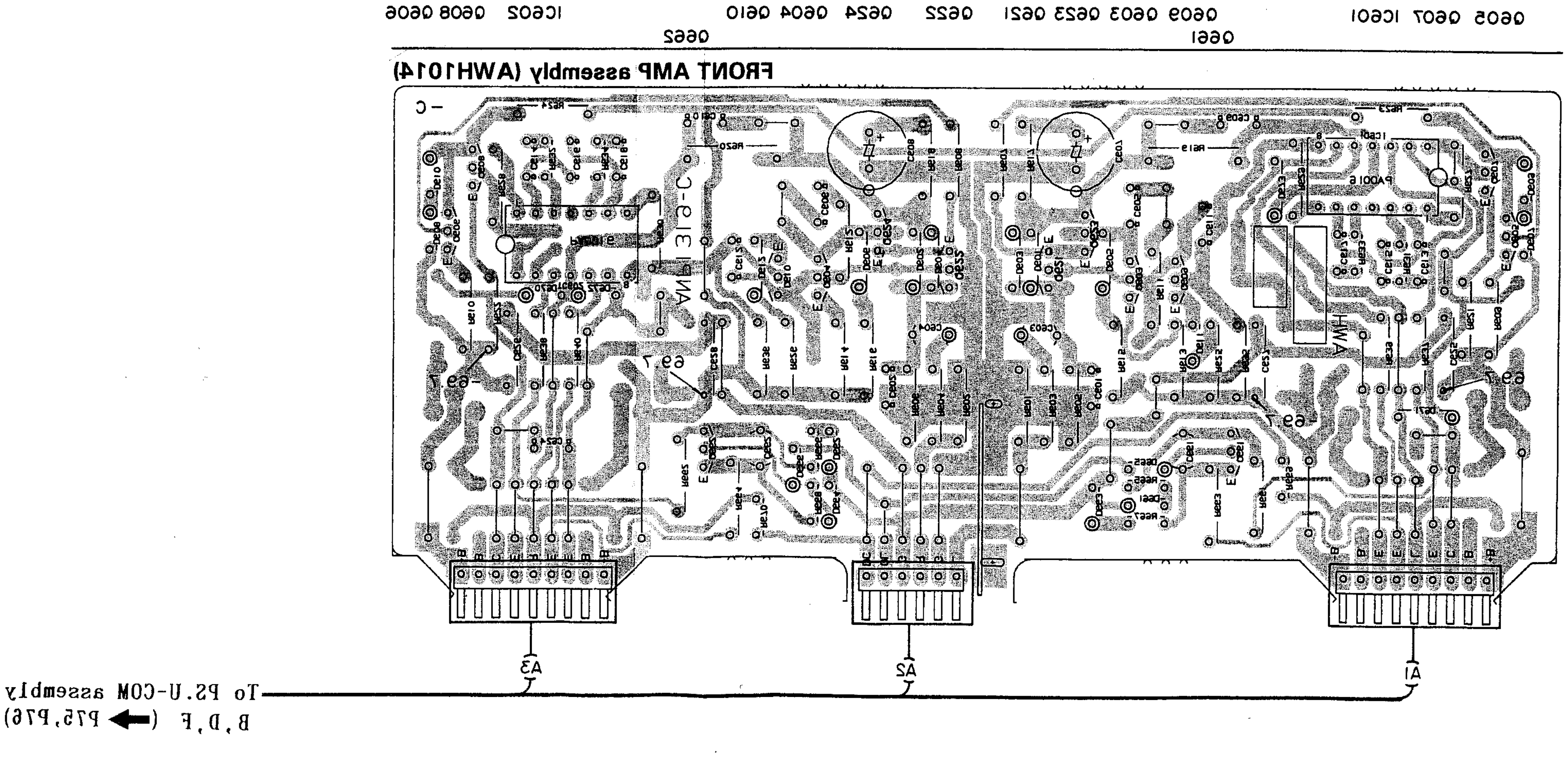
3. The capactor terminal marked with ◎(double circles) shows negatine termianl.
4. The diode terminal marked with ◎(double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.


9
8
7
6
5
4
A
B
C
D
SD TYPE ONLY
S3
AM:10kHz/
FM:100kHz
AM:9kHz/
FM:50kHz
TUNER assembly (AWE1160)
PIONEER
KUC TYPE ONLY
53
15
5
50
49
48
46
45
44
43
S-METER
VCO
LM7001
LA1266
Q401
Q402 Q405
Q403
Q473 Q474 Q471 Q472
Q421
IC431
IC471
VR451 VR432 VR431
Q451
IC451
Q453 Q452 Q454
To PS.U-COM assembly
CN37 (➡ P75)
R. C. AMP assembly (AWZ3568)
AWZ3568
Q8
Q6
Q10
38
38
38
assembly
(➡ P76)
Q608 Q606
IC602
Q610
Q662
FRONT AMP assembly (AWH1014)
69
69
A3
To PS.U-COM assembly
B,D,F (➡ P75,P76)


SD TYPE ONLY
AM:10kHz/ FM:100kHz
AM:9kHz/ FM:50kHz
PIONEER
ANP1436
KUC TYPE ONLY
VR451
IC451
Q453 Q452 Q454
To PS.U-COM assembly
CN37 (➡ P75)


Q8
Q6
Q10
Q9
Q5
Q7
-38.3
CN15
AWZ3568
To PS.U-COM assembly
J15 (➡ P76)
To PS.U-COM assembly
CN16 (➡ P76)

R. C. AMP assembly (AWZ3568)


Q606 Q608 IC602 Q610 Q604 Q624 Q622 Q621 Q623 Q603 Q609 IC601 Q607 Q605
Q662
Q661
AWH1014
-69.7
A3
A2
A1
To PS.U-COM assembly
B,D,F (➡ P75,P76)

FRONT AMP assembly (AWH1014)

A

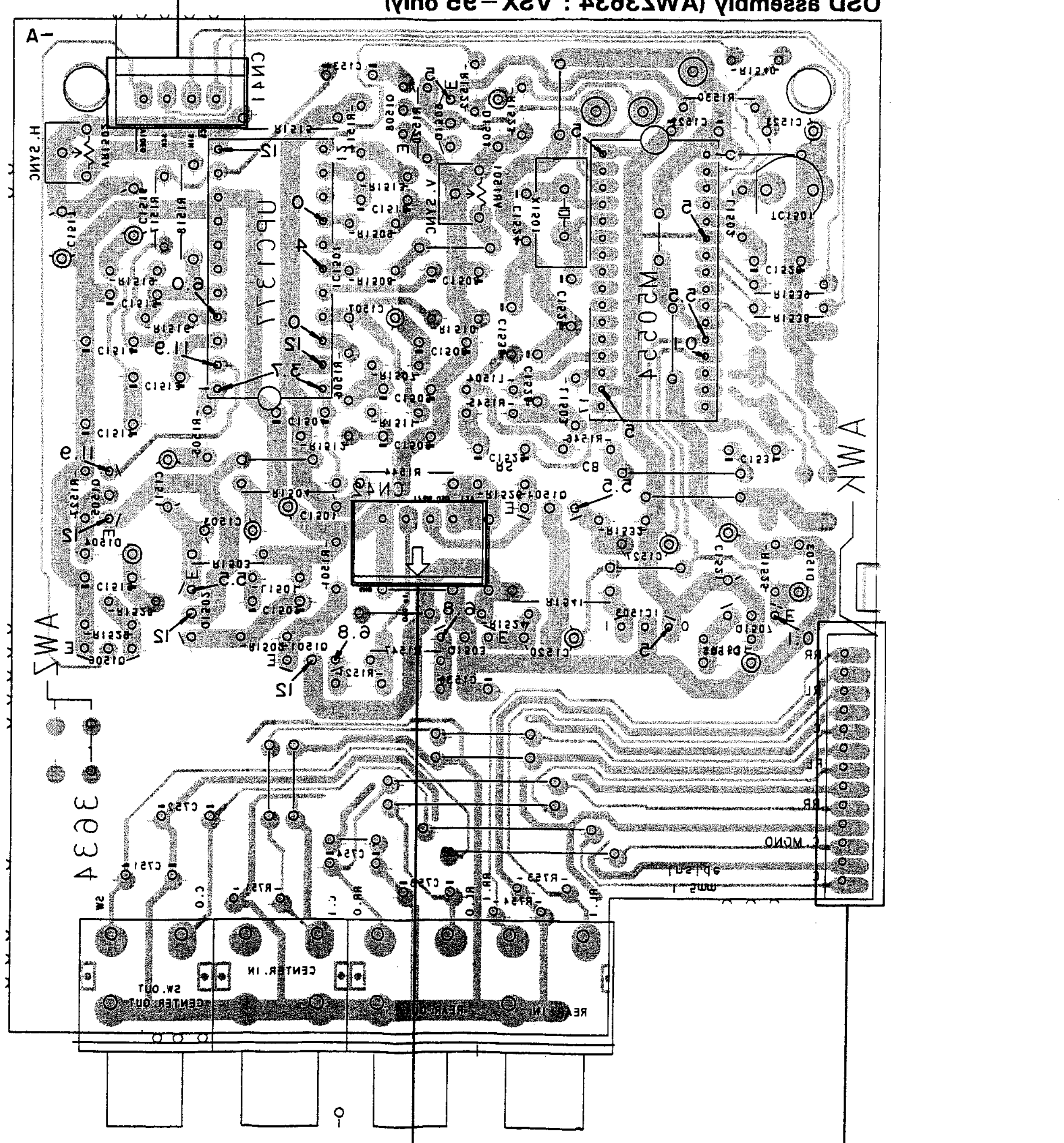
B

C

D

OSD assembly (AWZ3634 : VSX−95 only)

To FRONT CONTROL assembly
CN1901 (⬅ P66)

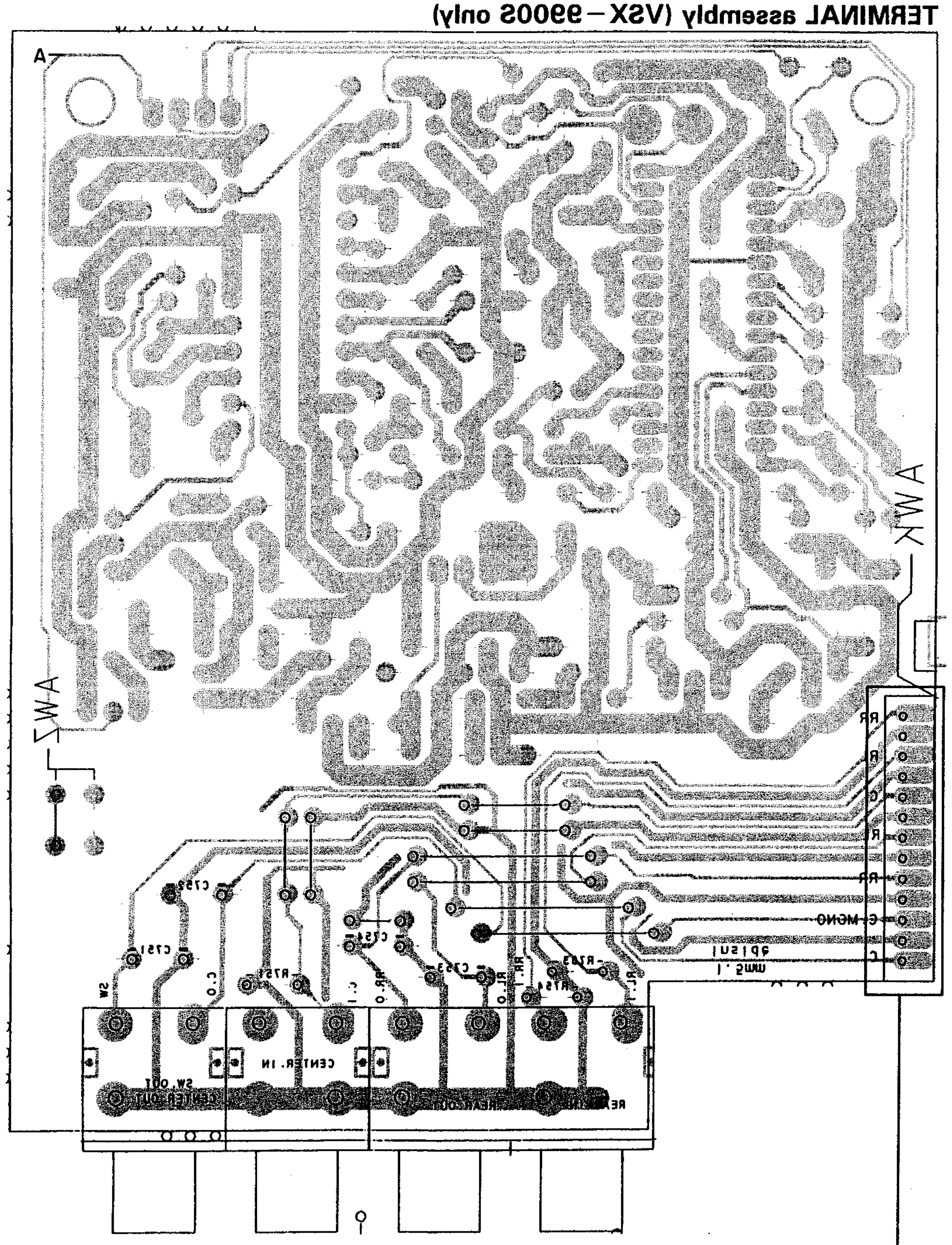

CN41
H. SYNC
V. SYNC
CN49
AWZ
AWK
3634
CENTER IN
SW.OUT
CENTER OUT
REAR IN
MONO

To ENHANCER assembly
J42 (⬅ P26)

assembly
(⬅ P76)

Q1509 Q1508
VR1502
VR1501
IC1502 IC1501
Q1504 Q1505
Q1507 Q1502
IC1503
Q1503 Q1506
Q1501

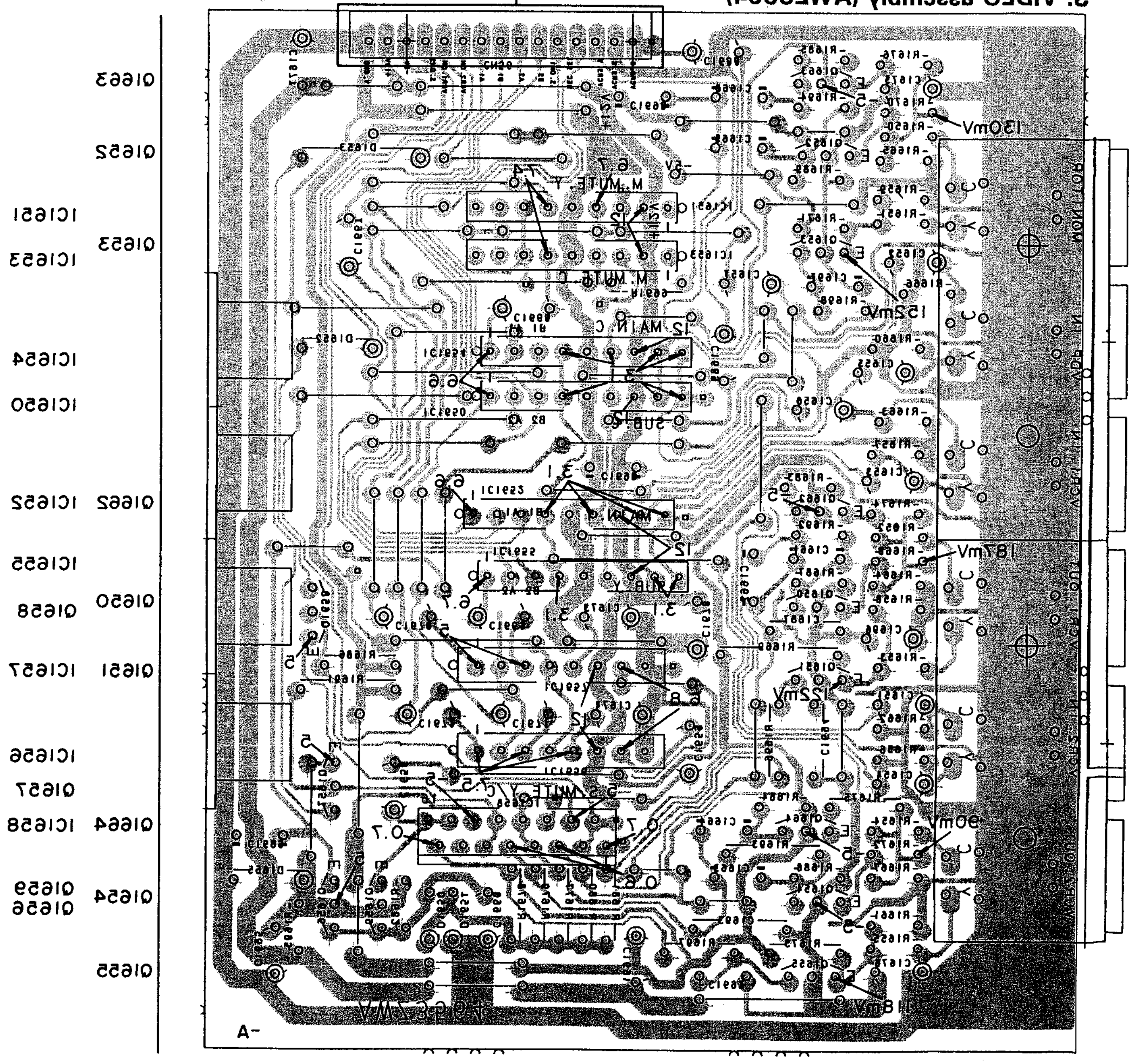
TERMINAL assembly (VSX−9900S only)


AWZ
AWK
CENTER IN
SW.OUT
CENTER OUT
REAR OUT
MONO

PS.U-COM assembly
CN58 (⬅ P76)

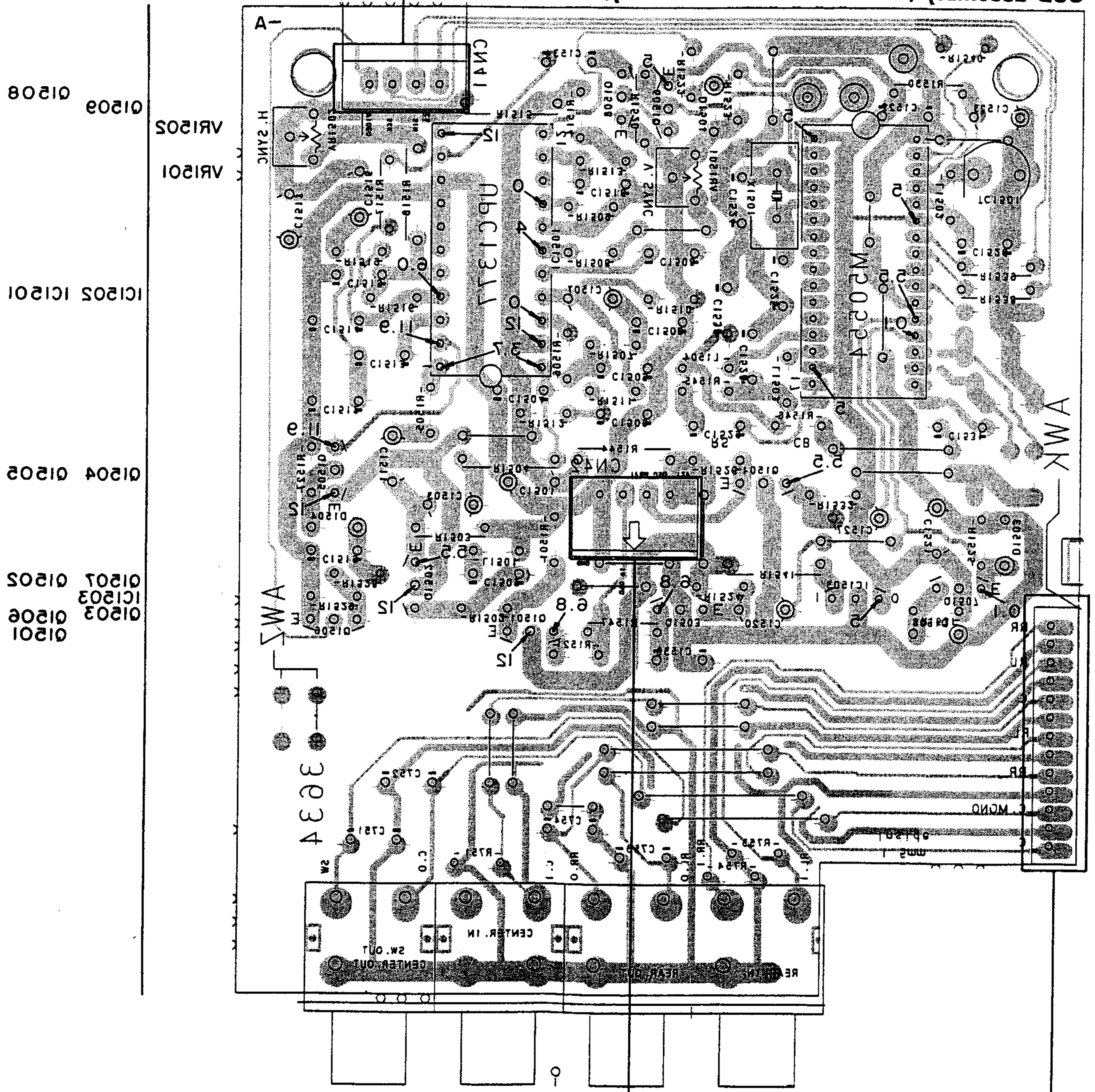
To PS.U-COM assembly
CN56 (⬅ P76)

S. VIDEO assembly (AWZ3564)


Q1663
Q1652
IC1651
Q1653
IC1653
IC1654
IC1650
Q1662
IC1652
IC1655
Q1650
Q1658
Q1651
IC1657
IC1656
Q1657
Q1664
IC1658
Q1654
Q1659
Q1656
Q1655
130mV
152mV
187mV
122mV
90mV
M.MUTE-Y
M.MUTE-C
MAIN.C
SUB
MAIN
MUTE Y/C
A-

To FRONT CONTROL assembly
CN1901 (⬅ P66)

OSD assembly (AWZ3634 : VSX-95 only)


Q1508
Q1509
VR1502
VR1501
IC1502
IC1501
Q1504
Q1505
Q1507
Q1502
IC1503
Q1506
Q1503
Q1501
CN41
H.SYNC
UPC1377
CN42
AWK
AWZ
3634
MONO
CENTER.IN
SW.OUT
CENTER.OUT
REAR.OUT
A-

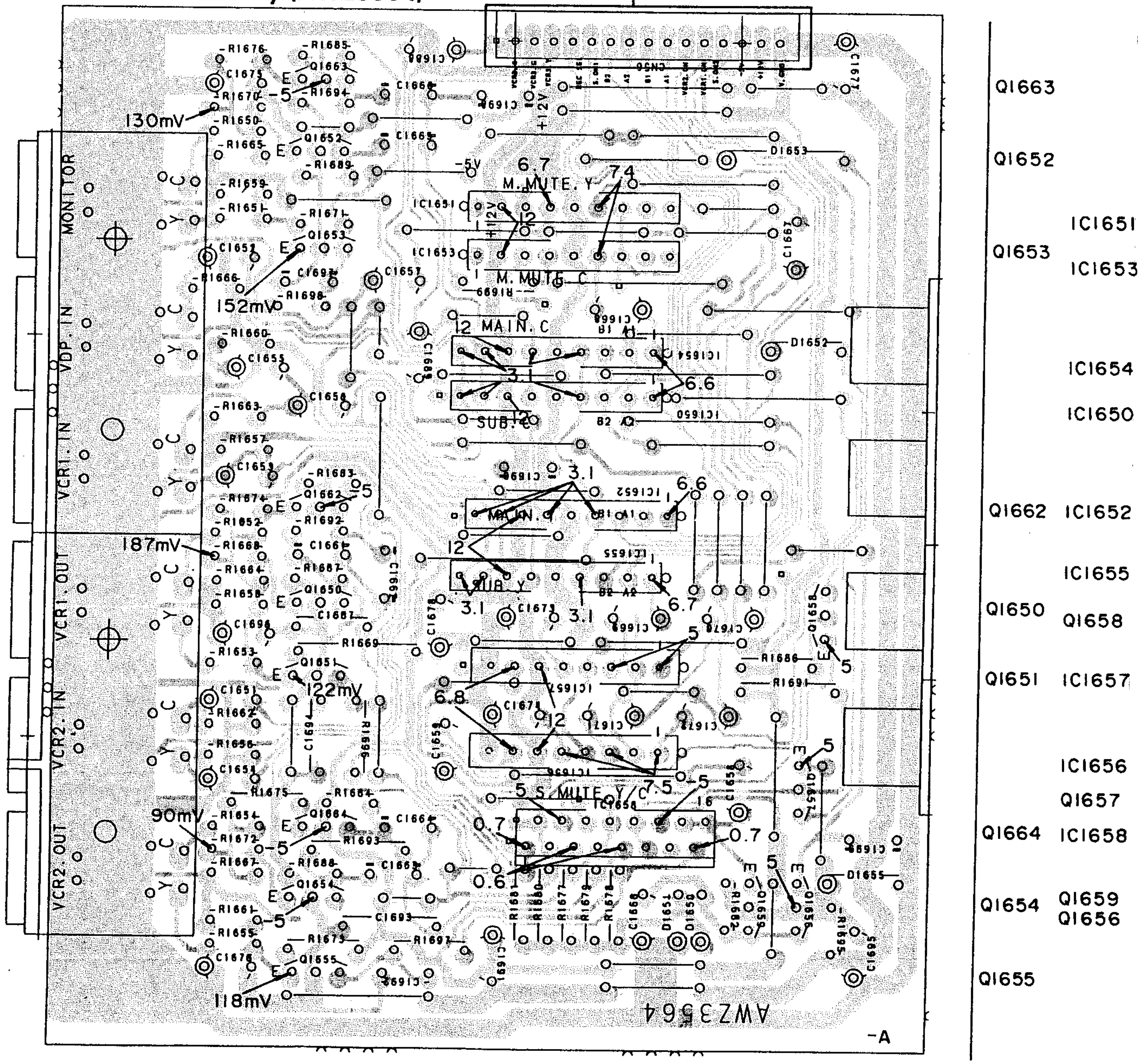
To ENHANCER assembly
J42 (⬅ P26)

To PS.U-COM assembly
CN58 (⬅ P76)

3.6 OSD (AWZ3634) and S. VIDEO assembly (AWZ3564)

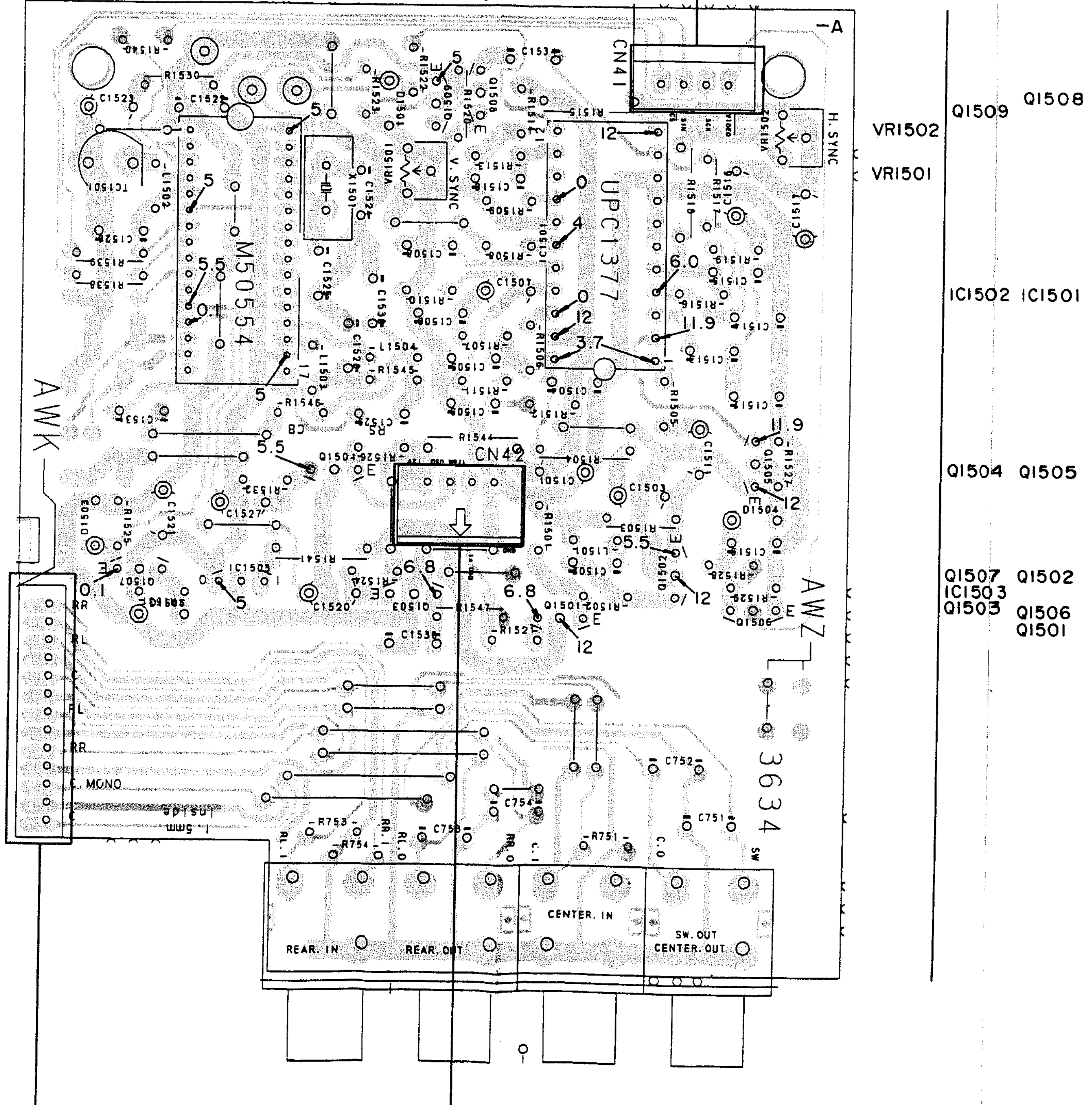
To PS.U-COM assembly
CN56 (➡ P76)

S. VIDEO assembly (AWZ3564)


Q1663
Q1652
Q1653
IC1651
IC1653
IC1654
IC1650
Q1662 IC1652
IC1655
Q1650 Q1658
Q1651 IC1657
IC1656
Q1657
Q1664 IC1658
Q1654 Q1659
Q1656
Q1655
MONITOR
VDP IN
VCR1 IN
VCR1 OUT
VCR2 IN
VCR2 OUT
130mV
152mV
187mV
122mV
90mV
118mV
M.MUTE.Y
M.MUTE.C
MAIN.C
SUB.C
MAIN.Y
SUB.Y
S.MUTE Y/C
6.7
7.4
12
6.6
3.1
6.8
7.5
0.7
0.6
5
AWZ3564
-A

OSD assembly (AWZ3634 : VSX−95 only)

To FRONT CONTROL assembly
CN1901 (➡ P66)

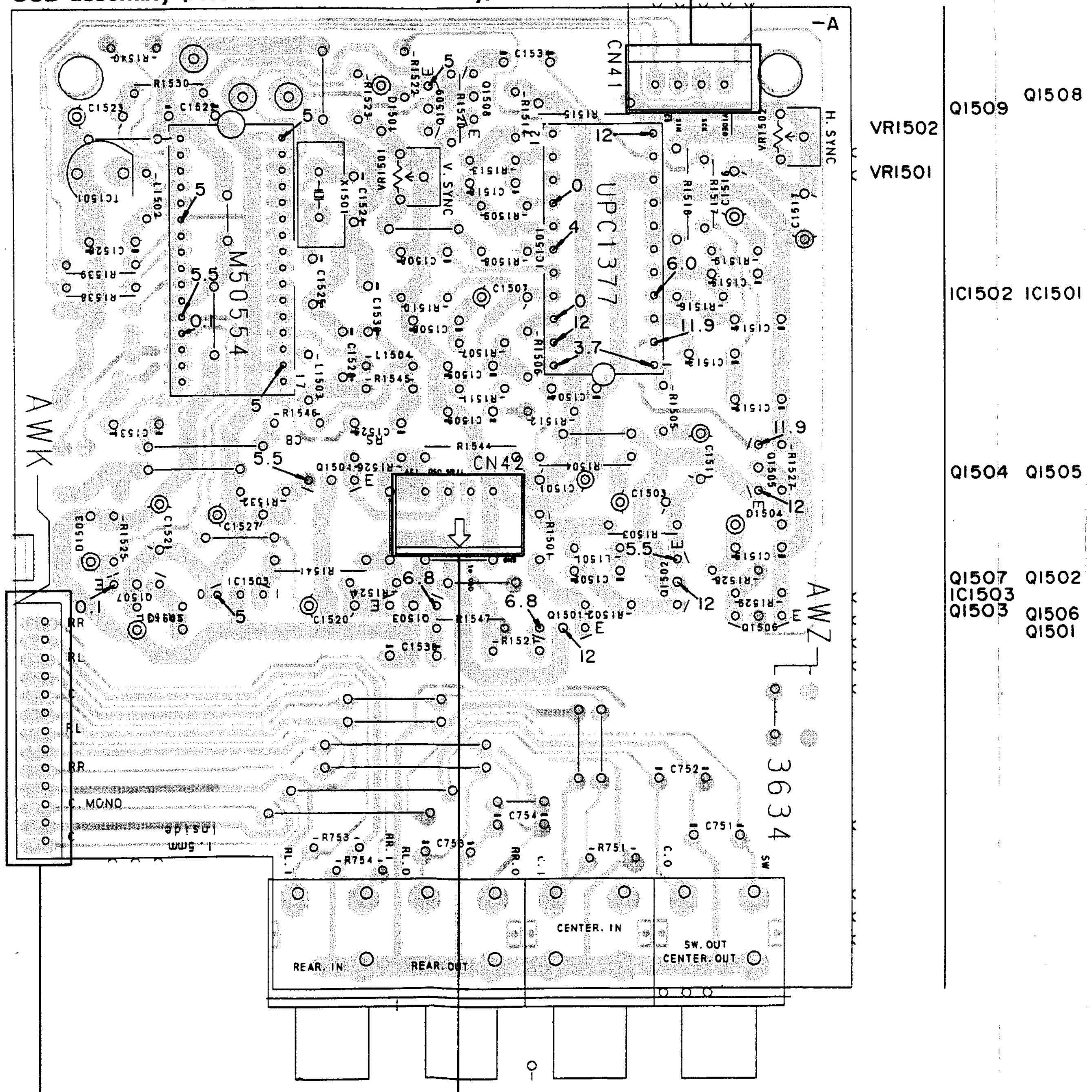

Q1509 Q1508
VR1502
VR1501
IC1502 IC1501
Q1504 Q1505
Q1507 Q1502
IC1503
Q1503 Q1506
Q1501
CN41
CN42
H.SYNC
V.SYNC
M50554
UPC1377
AWK
AWZ
3634
REAR. IN
REAR. OUT
CENTER. IN
SW. OUT
CENTER. OUT
C.MONO
RR
RL
5
5.5
12
6.0
11.9
3.7
6.8
-A

To PS.U-COM assembly
CN58 (➡ P76)

To ENHANCER assembly
J42 (➡ P26)

To FRONT CONTROL assembly
CN1901 (➡ P66)

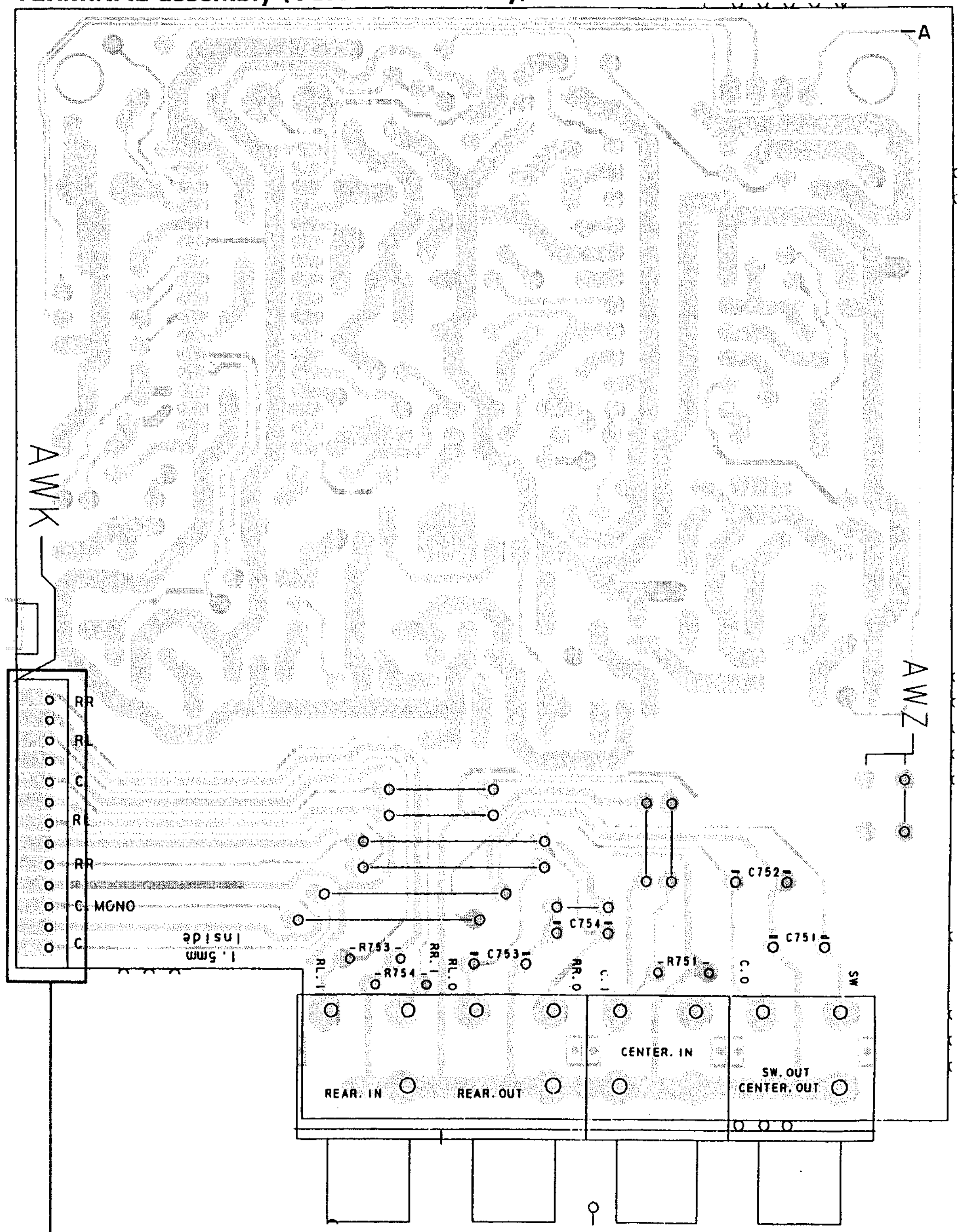
OSD assembly (AWZ3634 : VSX−95 only)


CN41
CN42
M50554
UPC1377
VR1502
VR1501
H. SYNC
V. SYNC
AWK
AWZ
3634
Q1509 Q1508
VR1502
VR1501
IC1502 IC1501
Q1504 Q1505
Q1507 Q1502
IC1503
Q1503 Q1506
Q1501
REAR. IN
REAR. OUT
CENTER. IN
SW. OUT
CENTER. OUT
C. MONO
RR
RL
C
FL
-A

assembly
➡ P76)

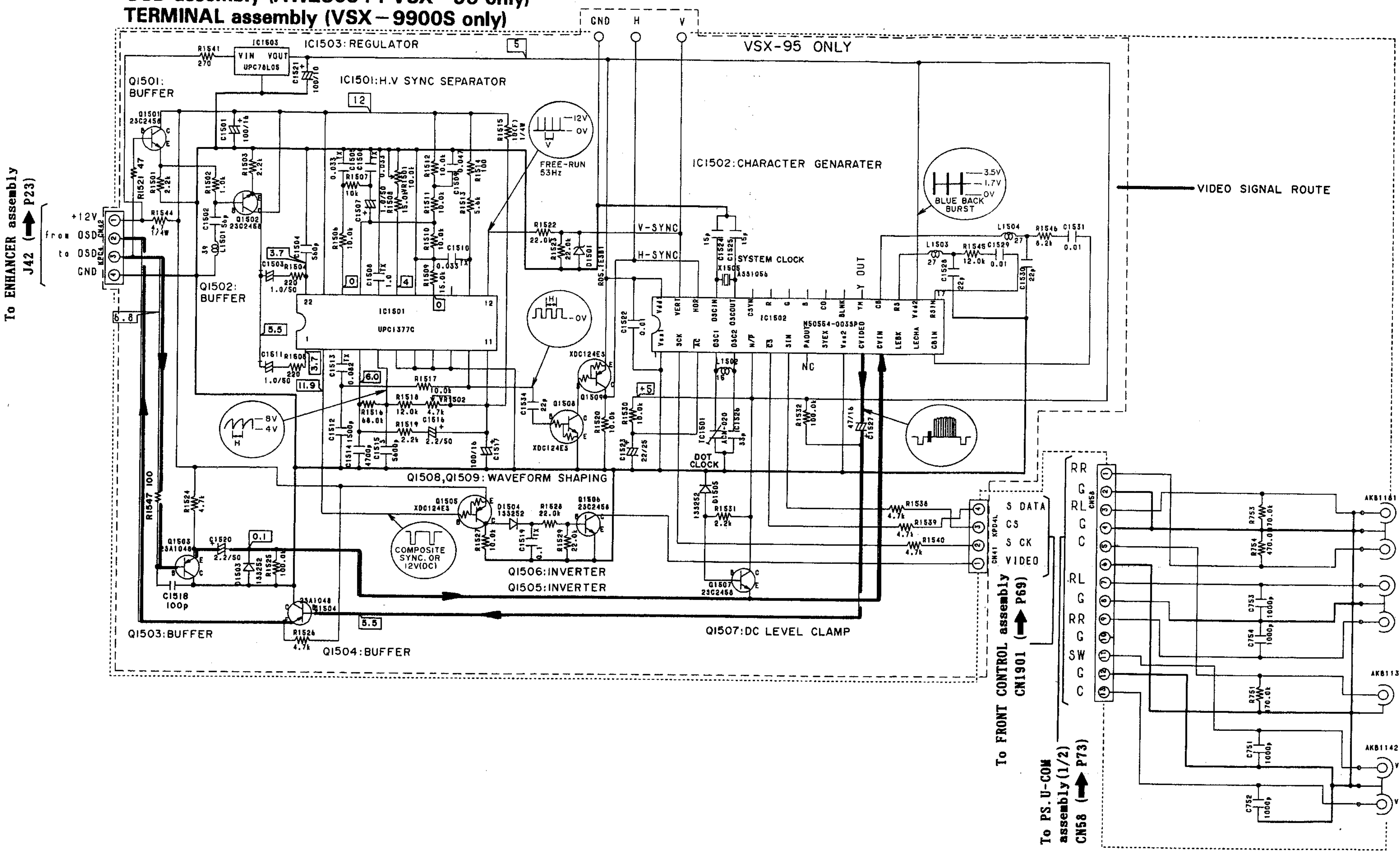
To ENHANCER assembly
J42 (➡ P26)

TERMINAL assembly (VSX−9900S only)


AWK
AWZ
-A
RR
RL
C
RL
RR
C. MONO
C
REAR. IN
REAR. OUT
CENTER. IN
SW. OUT
CENTER. OUT
C752
C751
C754
C753
R751
R753
R754

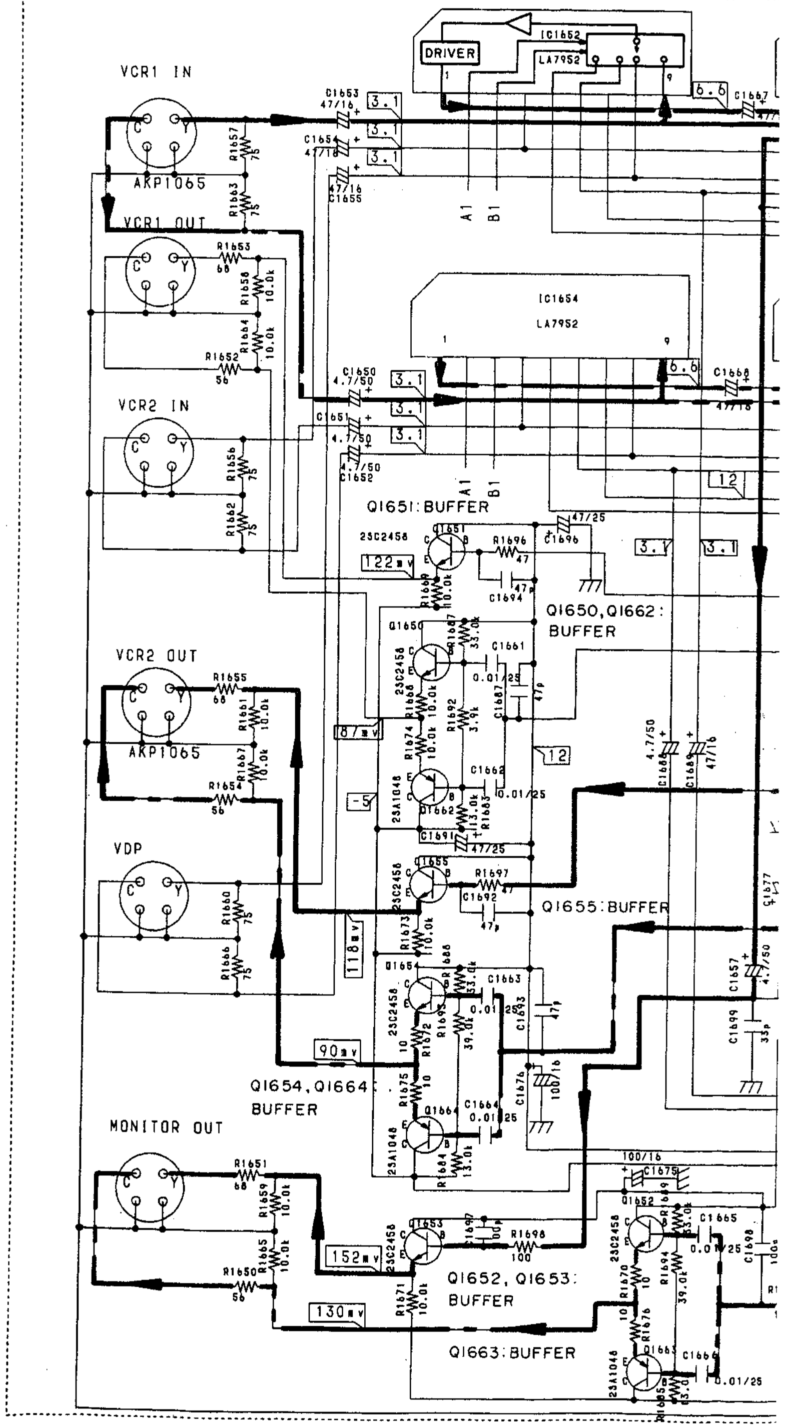
PS.U-COM assembly
CN58 (➡ P76)

OSD assembly (AWZ3634 : VSX−95 only)
TERMINAL assembly (VSX−9900S only)

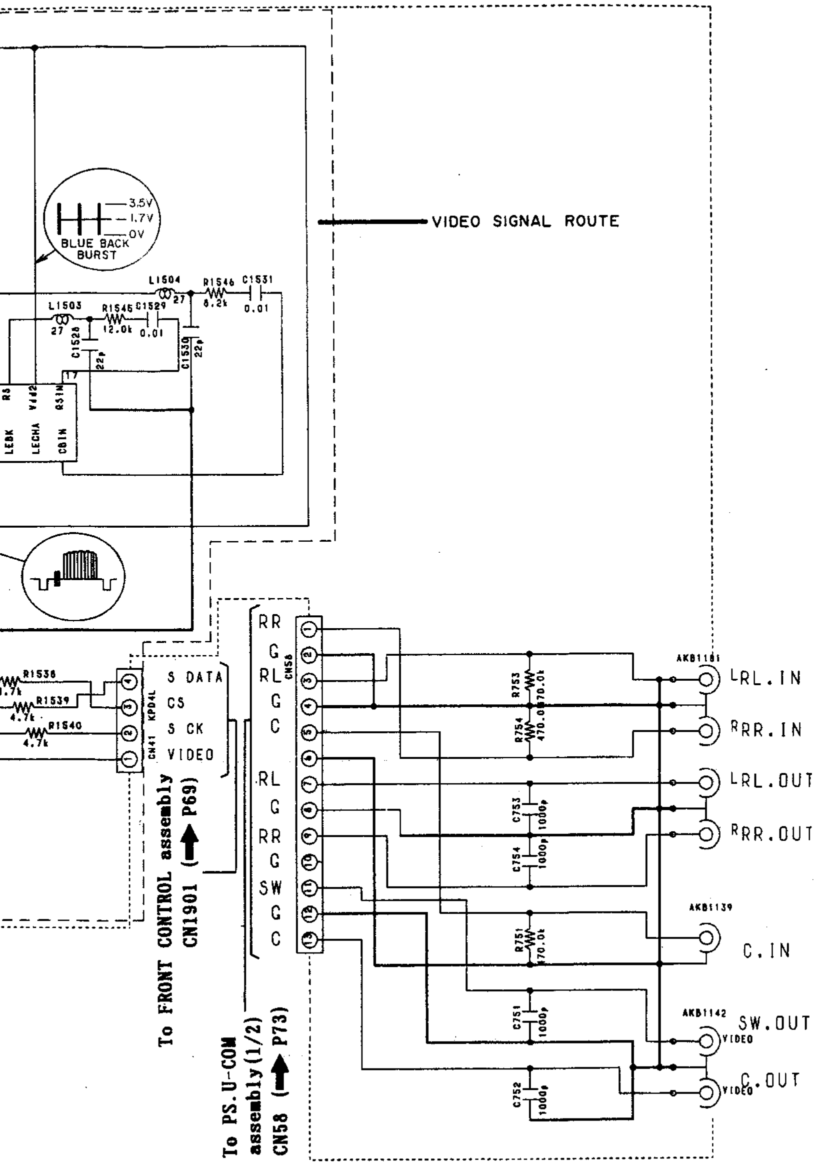


GND
H
V
VSX-95 ONLY
IC1503:REGULATOR
IC1501:H.V SYNC SEPARATOR
IC1502:CHARACTER GENARATER
Q1501: BUFFER
Q1502: BUFFER
Q1503:BUFFER
Q1504:BUFFER
Q1505:INVERTER
Q1506:INVERTER
Q1507:DC LEVEL CLAMP
Q1508,Q1509: WAVEFORM SHAPING
FREE-RUN 53Hz
BLUE BACK BURST
SYSTEM CLOCK
DOT CLOCK
COMPOSITE SYNC.OR 12V(DC)
V-SYNC
H-SYNC
Y OUT
VIDEO SIGNAL ROUTE
+12V
from OSD
to OSD
GND
To ENHANCER assembly J42 (→ P23)
S DATA
CS
S CK
VIDEO
To FRONT CONTROL assembly CN1901 (→ P69)
To PS.U-COM assembly(1/2) CN58 (→ P73)
RR
G
RL
G
C
RL
G
RR
G
SW
G
C
LRL.IN
RRR.IN
LRL.OUT
RRR.OUT
C.IN
SW.OUT VIDEO
C.OUT VIDEO
AKB1181
AKB1139
AKB1142

S. VIDEO assembly (AWZ3564)

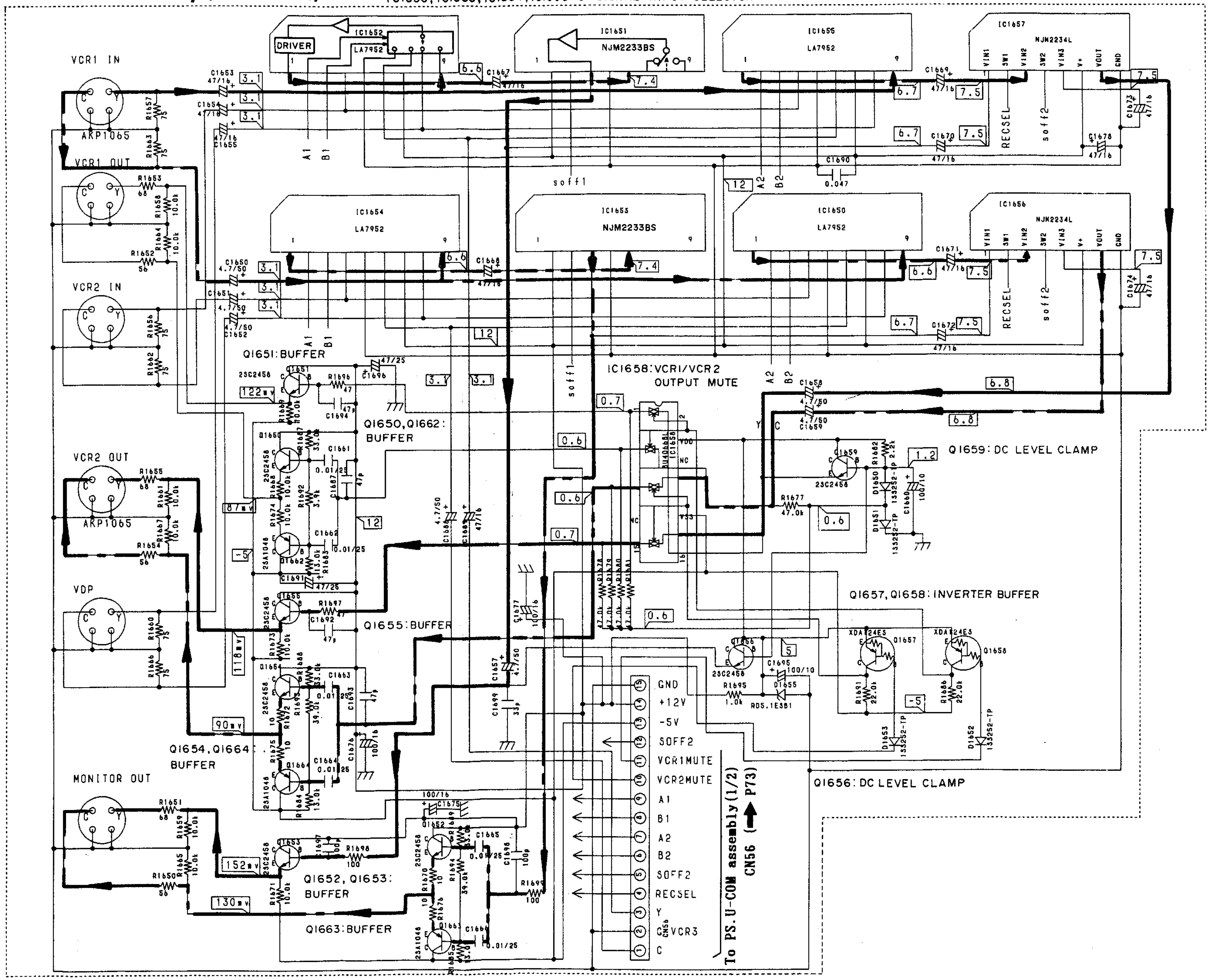


IC1651, IC1652, IC165
IC1650, IC1653, IC165
DRIVER
IC1652 LA7952
IC1654 LA7952
VCR1 IN
VCR1 OUT
VCR2 IN
VCR2 OUT
VDP
MONITOR OUT
AKP1065
Q1651:BUFFER
Q1650,Q1662: BUFFER
Q1655:BUFFER
Q1654,Q1664: BUFFER
Q1652, Q1653: BUFFER
Q1663:BUFFER
122mV
118mV
90mV
152mV
130mV

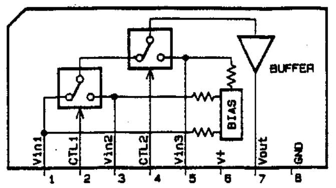

VIDEO SIGNAL ROUTE
3.5V
1.7V
0V
BLUE BACK
BURST
L1504
R1546 8.2k
C1531 0.01
L1503 27
R1545 12.0k
C1529 0.01
C1528
C1530
LEBK
LECHA
V442
OSIN
CBIN
R1538
R1539
R1540
S DATA
CS
S CK
VIDEO
CN41 KPD4L
To FRONT CONTROL assembly CN1901 (P69)
To PS.U-COM assembly(1/2) CN58 (P73)
CN56
RR
G
RL
G
C
RL
G
RR
SW
G
C
R753 470.0k
R754 470.0k
C753 1000p
C754 1000p
R751 470.0k
C751 1000p
C752 1000p
AKB1181
LRL.IN
RRR.IN
LRL.OUT
RRR.OUT
AKB1139
C.IN
AKB1142
VIDEO
SW.OUT
C.OUT

S. VIDEO assembly (AWZ3564)

IC1651, IC1652, IC1655, IC1657: Y-SIGNAL INPUT SELECTOR
IC1650, IC1653, IC1654, IC1656: C-SIGNAL INPUT SELECTOR


VCR1 IN
AKP1065
VCR1 OUT
VCR2 IN
VCR2 OUT
AKP1065
VDP
MONITOR OUT
DRIVER
IC1652
LA7952
IC1651
NJM2233BS
IC1655
LA7952
IC1657
NJM2234L
IC1654
LA7952
IC1653
NJM2233BS
IC1650
LA7952
IC1656
NJM2234L
VIN1
SW1
VIN2
SW2
VIN3
V+
VOUT
GND
RECSEL
soff2
soff1
A1
B1
A2
B2
C1653 47/16
C1654 47/16
C1655 47/16
C1650 4.7/50
C1651 4.7/50
C1652 4.7/50
C1667 47/16
C1668 47/16
C1669 47/16
C1670 47/16
C1671 47/16
C1672 47/16
C1673 47/16
C1674 47/16
C1678 47/16
C1690 0.047
3.1
6.6
7.4
6.7
7.5
12
6.8
0.7
0.6
1.2
5
-5
R1657 75
R1663 75
R1653 68
R1658 10.0k
R1664 10.0k
R1652 56
R1656 75
R1662 75
R1655 68
R1661 10.0k
R1667 10.0k
R1654 56
R1660 75
R1666 75
R1651 68
R1659 10.0k
R1665 10.0k
R1650 56
Q1651: BUFFER
2SC2458
122mV
R1696 47
C1694 47p
C1696 47/25
Q1650, Q1662: BUFFER
Q1650
Q1662
2SA1048
C1661 0.01/25
C1662 0.01/25
C1697 47/25
87mV
-5
Q1655
R1697 47
C1692 47p
Q1655: BUFFER
118mV
Q1654
C1663 0.01/25
C1664 0.01/25
C1693 47p
90mV
Q1654, Q1664: BUFFER
Q1664
C1676 100/16
152mV
Q1653
R1698 100
Q1652, Q1653: BUFFER
130mV
Q1652
C1665 0.01/25
C1675 100/16
C1699 100
R1699 100
Q1663: BUFFER
Q1663
C1666 0.01/25
IC1658: VCR1/VCR2 OUTPUT MUTE
IC1658 BU4066BL
VDD
VSS
NC
C1688 4.7/50
C1689 47/16
C1677 100/16
C1657 4.7/50
C1699 3p
R1678 47.0k
R1679 47.0k
R1680 47.0k
R1681 47.0k
C1658 4.7/50
C1659 4.7/50
Y
C
Q1659: DC LEVEL CLAMP
Q1659
2SC2458
R1682 2.2k
D1650 1SS252-1P
C1660 100/10
D1651 1SS252-1P
R1677 47.0k
Q1657, Q1658: INVERTER BUFFER
XDA124ES Q1657
XDA124ES Q1658
R1691 22.0k
R1686 22.0k
D1653 1SS252-1P
D1652 1SS252-1P
Q1656
2SC2458
C1695 100/10
R1695 1.0k
D1655 RD5.1ESB1
Q1656: DC LEVEL CLAMP
GND
+12V
-5V
SOFF2
VCR1MUTE
VCR2MUTE
A1
B1
A2
B2
SOFF2
RECSEL
Y
C
VCR3
CN56
To PS.U-COM assembly(1/2) CN56 (P73)
━━━ Y-SIGNAL
━ ━ ━ C-SIGNAL

IC1657·1656 NJM2234L

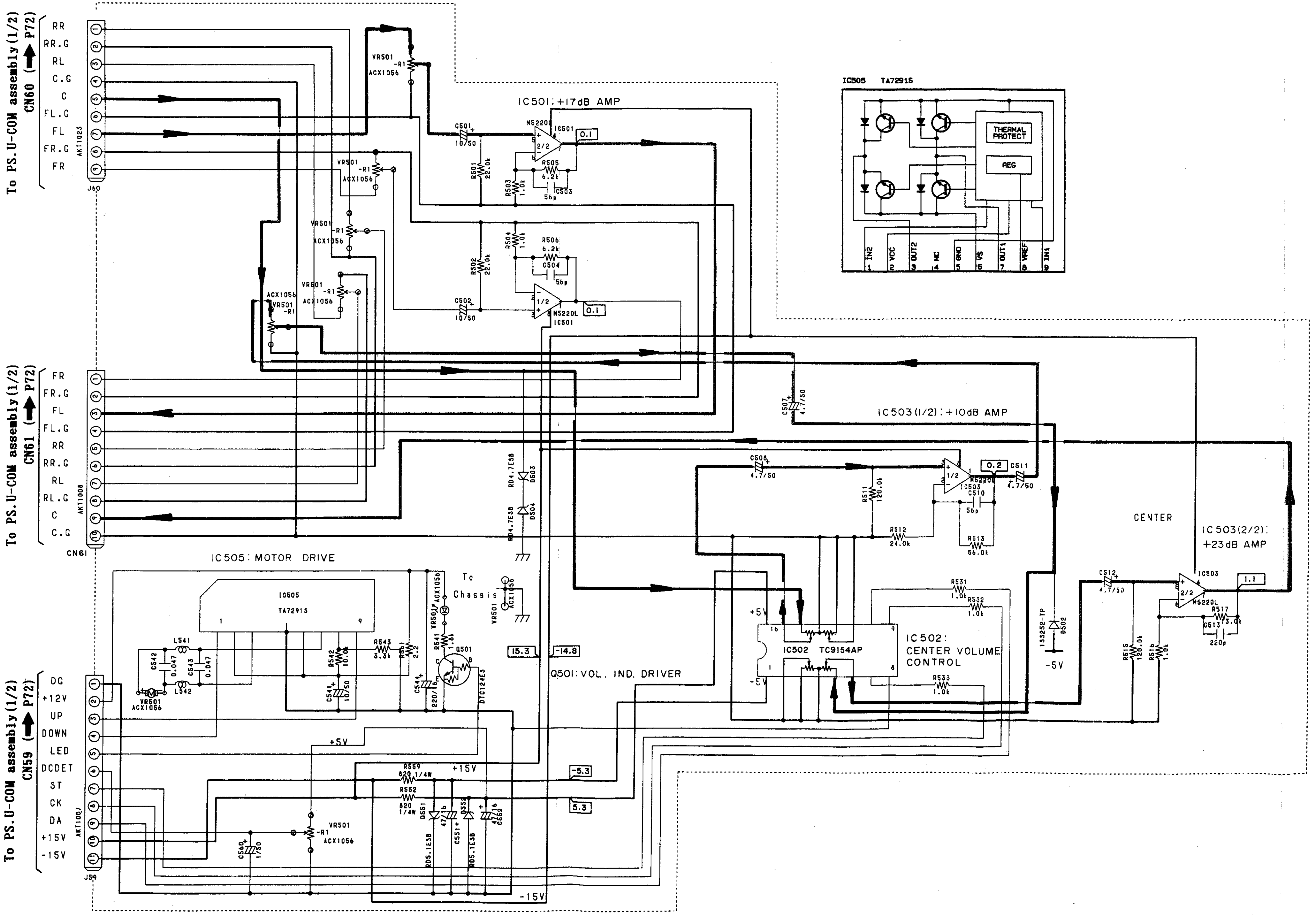

BUFFER
BIAS
Vin1
CTL1
Vin2
CTL2
Vin3
V+
Vout
GND
1
2
3
4
5
6
7
8

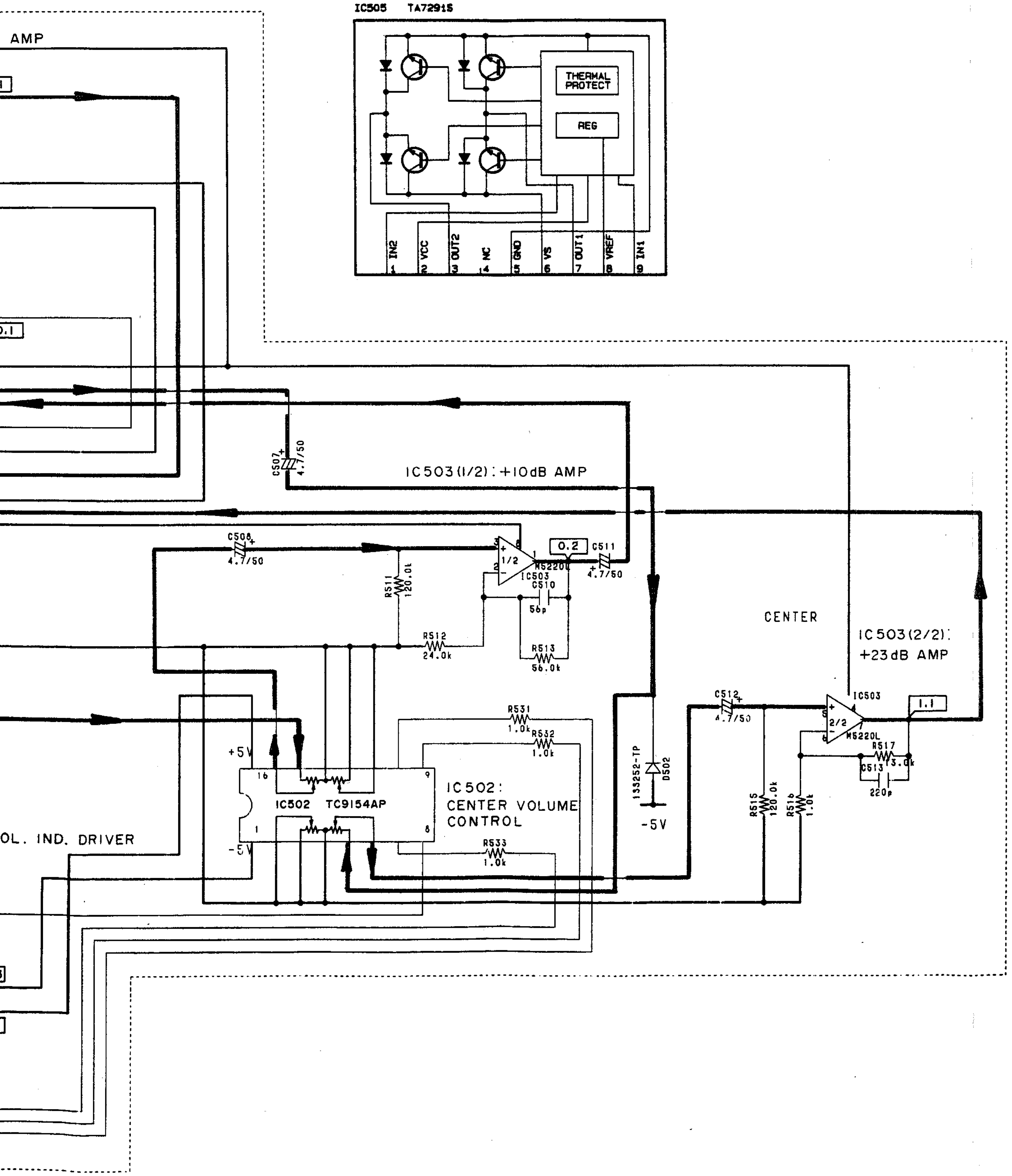
IC1601-1606(NJM2234L)

INPUT SIGNAL		OUTPUT SIGNAL
CTL1 (2 PIN)	CTRL2 (4 PIN)	V OUT (7 PIN)
L	L	Vin1(1 PIN)
H	L	Vin2(3 PIN)
L/H	H	Vin3(5 PIN)

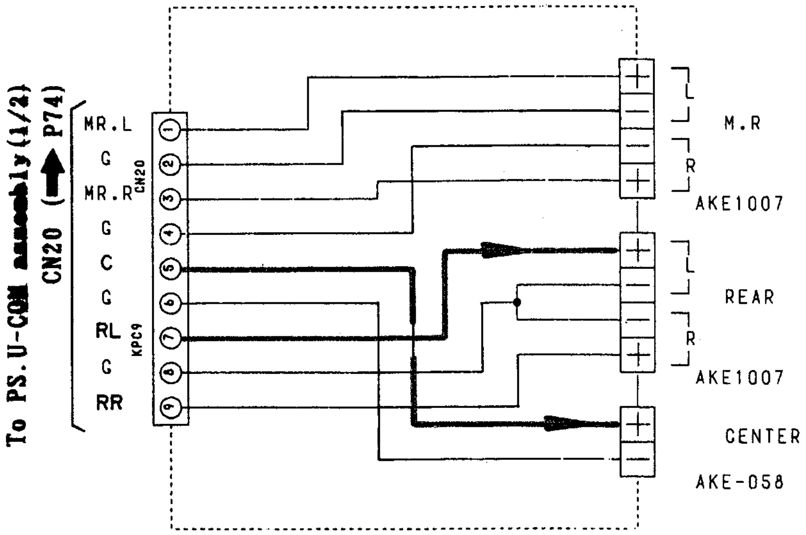
3.7 MOTOR VOLUME (AWZ3567), HEADPHONE and R. C. SPEAKER assembly (AWZ3566)

MOTOR VOLUME assembly (AWZ3567)

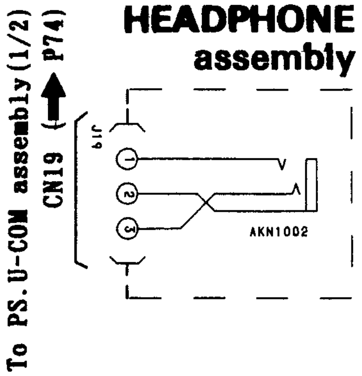

To PS.U-COM assembly (1/2) CN60 (➡ P72)
RR
RR.G
RL
C.G
C
FL.G
FL
FR.G
FR
AKT1023
J60
VR501 -R1 ACX1056
IC501: +17dB AMP
C501 10/50
M5220L
IC501
2/2
0.1
R501 22.0k
R503 1.0k
R505 6.2k
C503 56p
R504 1.0k
R506 6.2k
C504 56p
R502 22.0k
C502 10/50
1/2
M5220L IC501
0.1
IC505 TA7291S
THERMAL PROTECT
REG
1 IN2
2 VCC
3 OUT2
4 NC
5 GND
6 VS
7 OUT1
8 VREF
9 IN1
To PS.U-COM assembly (1/2) CN61 (➡ P72)
FR
FR.G
FL
FL.G
RR
RR.G
RL
RL.G
C
C.G
AKT1006
CN61
RD4.7ESB D503
RD4.7ESB D504
C507 4.7/50
IC503(1/2): +10dB AMP
C508 4.7/50
R511 120.0k
1/2
M5220L
IC503
0.2
C511 4.7/50
C510 56p
R512 24.0k
R513 56.0k
CENTER
IC503(2/2): +23dB AMP
C512 4.7/50
IC503
2/2
M5220L
1.1
R517 3.0k
C513 220p
R515 120.0k
R516 1.0k
IC505: MOTOR DRIVE
IC505
TA7291S
L541
L542
C542 0.047
C543 0.047
VR501 ACX1056
R543 3.3k
R561 2.2
R542 10.0k
C541 10/50
C544 220/6
VR501 ACX1056
R541 1.8k
Q501
DTC124ES
To Chassis
VR501 ACX1056
15.3
-14.8
Q501: VOL. IND. DRIVER
IC502: CENTER VOLUME CONTROL
IC502 TC9154AP
+5V
-5V
R531 1.0k
R532 1.0k
R533 1.0k
1SS252-TP D502
-5V
To PS.U-COM assembly (1/2) CN59 (➡ P72)
DG
+12V
UP
DOWN
LED
DCDET
ST
CK
DA
+15V
-15V
AKT1007
J59
+5V
R559 820 1/4W
R552 820 1/4W
+15V
D551 RD5.1ESB
C551 47/16
D552 RD5.1ESB
C552 47/16
C560 1/50
VR501 -R1 ACX1056
-5.3
5.3
-15V


AMP
IC505 TA7291S
THERMAL PROTECT
REG
1 IN2
2 VCC
3 OUT2
4 NC
5 GND
6 VS
7 OUT1
8 VREF
9 IN1
C507 4.7/50
IC503(1/2): +10dB AMP
C508 4.7/50
R511 120.0k
IC503 1/2 M5220L
0.2
C511 4.7/50
C510 56p
R512 24.0k
R513 56.0k
CENTER
IC503(2/2): +23dB AMP
C512 4.7/50
IC503 2/2 M5220L
1.1
R517 3.0k
C513 220p
R515 120.0k
R516 1.0k
1SS252-TP D502
-5V
+5V
-5V
IC502 TC9154AP
IC502: CENTER VOLUME CONTROL
R531 1.0k
R532 1.0k
R533 1.0k
OL. IND. DRIVER

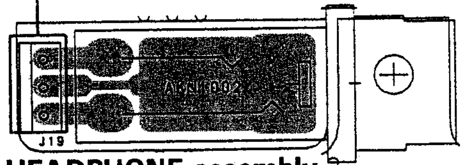
R. C. SPEAKER assembly (AWZ3566)


To PS.U-COM assembly(1/2) CN20 (➡ P74)
MR.L
G
MR.R
G
C
G
RL
G
RR
CN20
KPC9
L
R
M.R
AKE1007
L
R
REAR
AKE1007
CENTER
AKE-058

HEADPHONE assembly

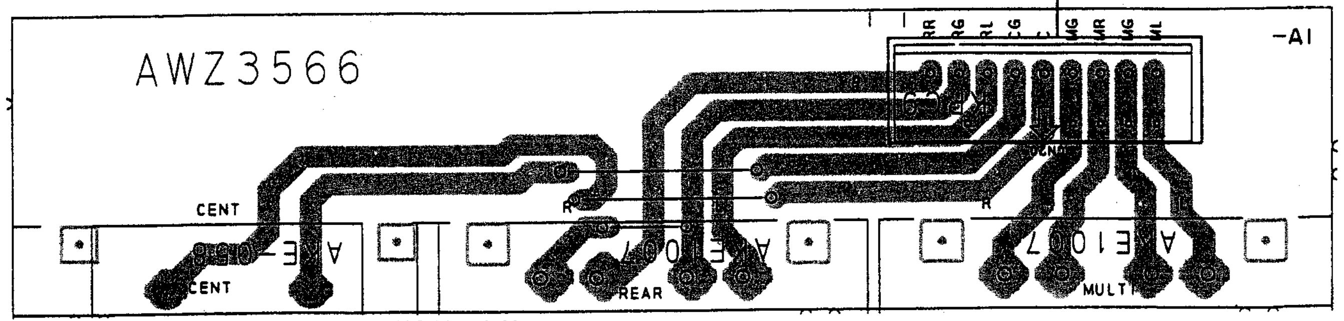

To PS.U-COM assembly(1/2) CN19 (➡ P74)
J19
1
2
3
AKN1002

To PS.U-COM assembly
CN19 (➡ P76)



HEADPHONE assembly

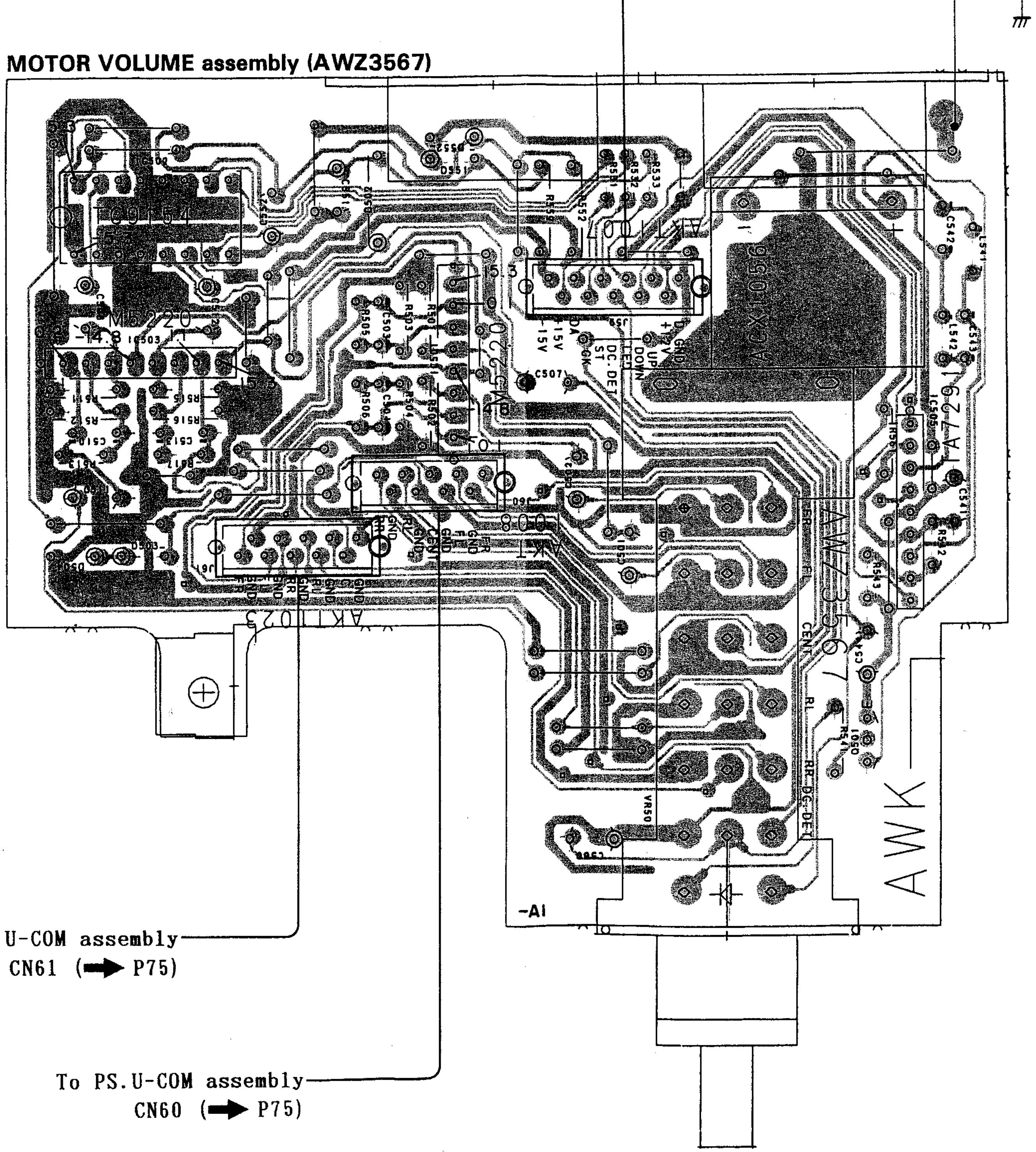
To PS.U-COM assembly
CN20 (➡ P76)


AWZ3566
-AI
RR
RG
RL
CG
MG
MR
MG
ML
CENT
R
R
CENT
REAR
MULTI

R. C. SPEAKER assembly (AWZ3566)

To PS.U-COM assembly
CN59 (➡ P75)

MOTOR VOLUME assembly (AWZ3567)

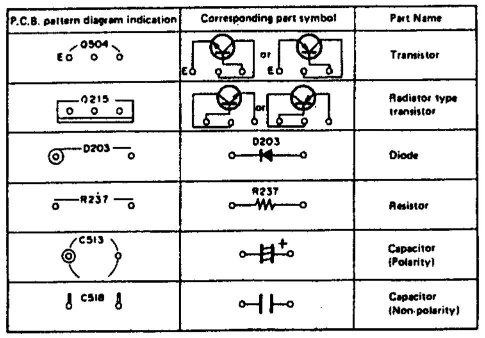

IC503
M5220
ACX1056
AWZ3567
AKT1023
AWK
J59
J61
+15V
-15V
GND
UP
DOWN
DC.DET
ST
CENT
RL
RR
DC.DET
VR501
C507
-AI

To PS.U-COM assembly
CN61 (➡ P75)

To PS.U-COM assembly
CN60 (➡ P75)

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.



P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504	E or E	Transistor
Q215	or	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513		Capacitor (Polarity)
C518		Capacitor (Non-polarity)

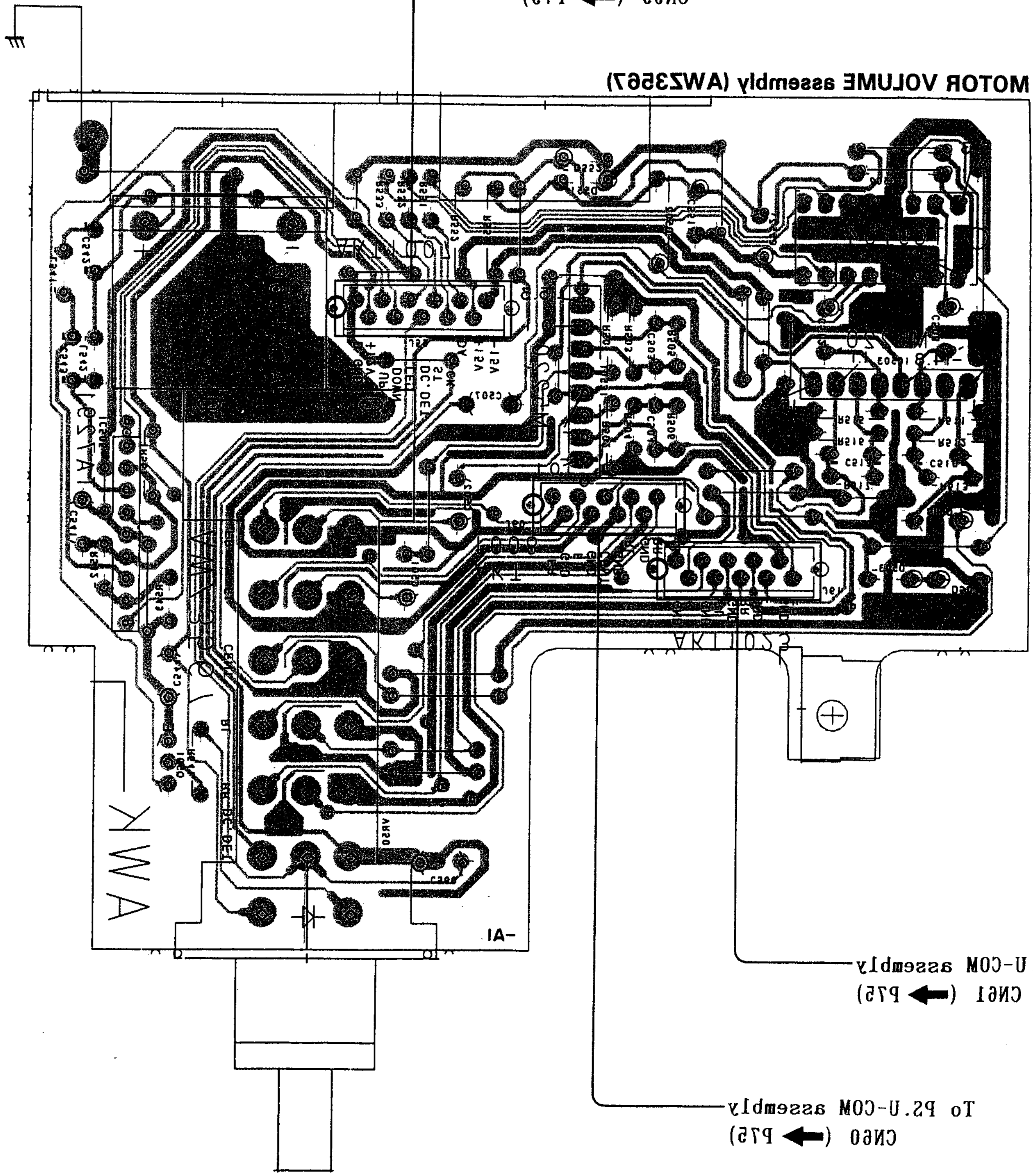
Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capector terminal marked with ◎(double circles) shows negatine termiani.
4. The diode terminal marked with ◎(double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

MOTOR VOLUME assembly (AWZ3567)

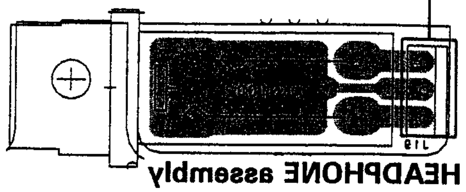
To PS.U-COM assembly
CN59 (⬅ P75)


AWX
-AI
DC.DET
ST
V15
GND
CEN
VR50

To PS.U-COM assembly
CN61 (⬅ P75)

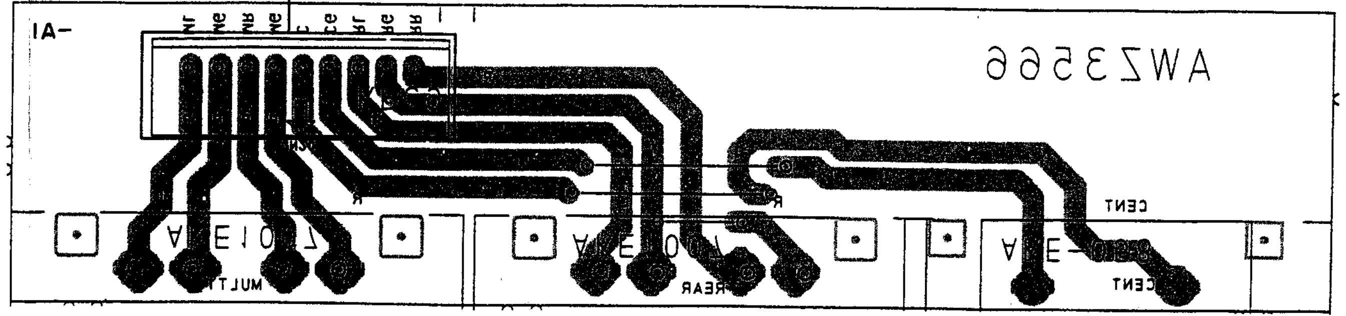
To PS.U-COM assembly
CN60 (⬅ P75)

To PS.U-COM assembly
CN19 (⬅ P76)

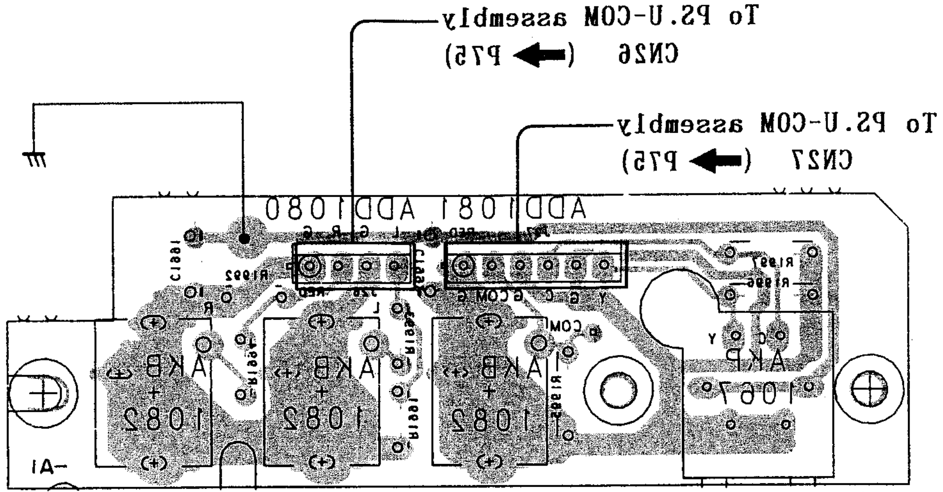


HEADPHONE assembly

To PS.U-COM assembly
CN20 (⬅ P76)

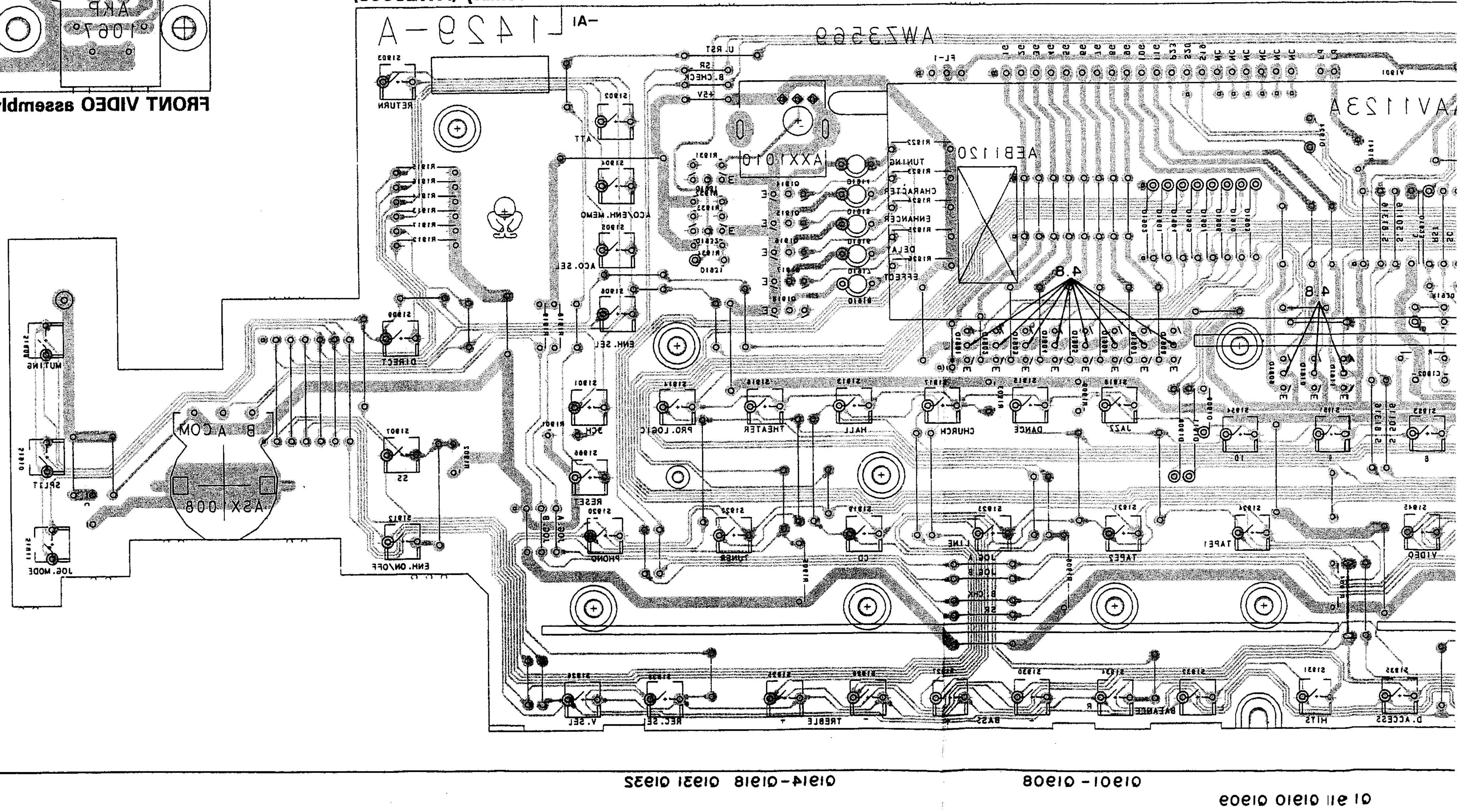

-AI
AWZ3566
CENT
MULTI
REAR
CENT

R. C. SPEAKER assembly (AWZ3566)


To PS.U-COM assembly
CN26 (← P75)
To PS.U-COM assembly
CN27 (← P75)
ADD1080 ADD1081 ADD1081
AKB1082
AKB1082
AKB1082
AKP1067
A1

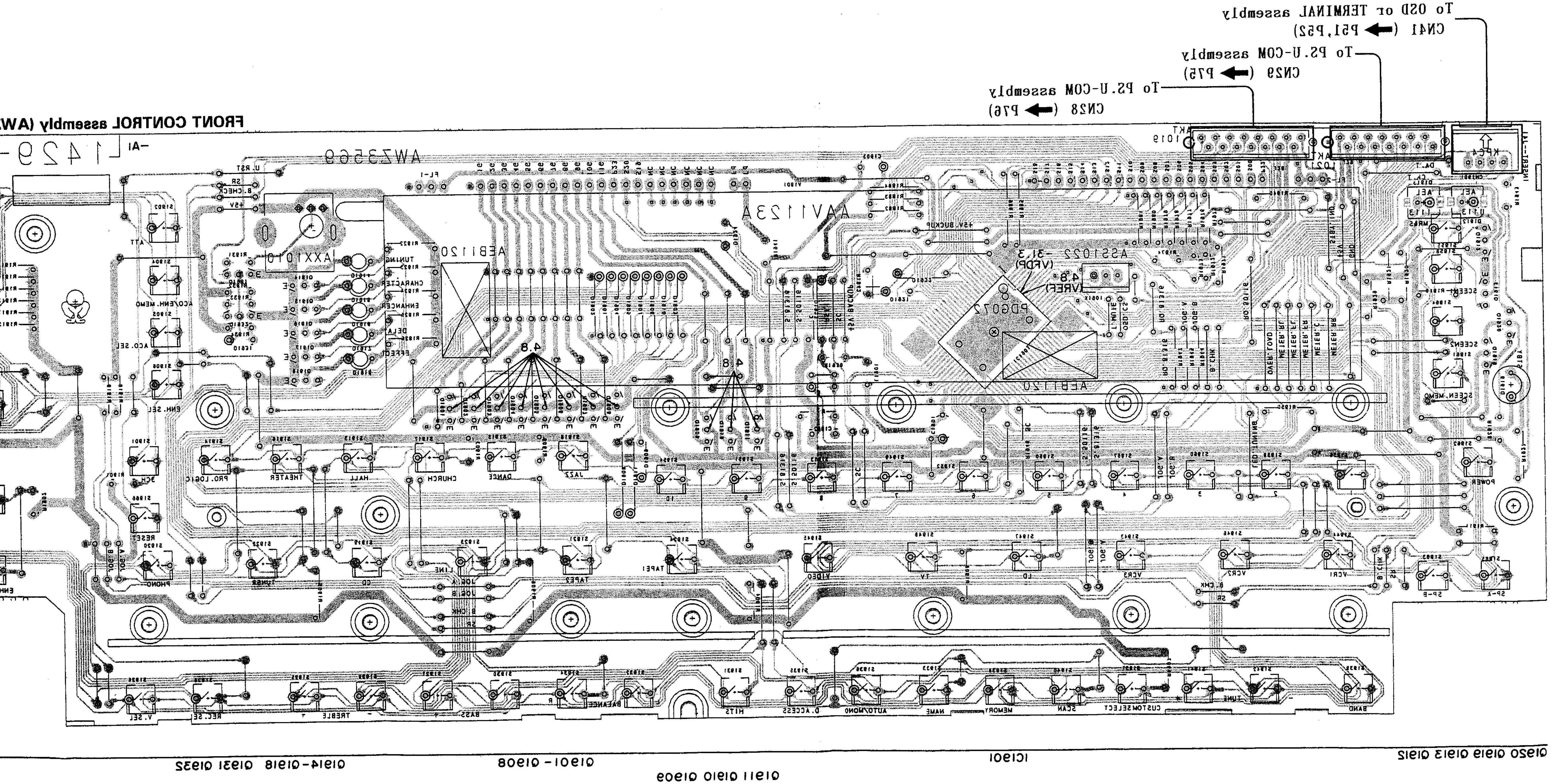
FRONT VIDEO assembly

FRONT CONTROL assembly (AWZ3569)


L1429-A
AWZ3569
AVI123A
AEB1120
AXX1010
ASX008
RETURN
ATT
ACO/ENH.MEMO
ACO.SEL
ENH.SEL
DIRECT
MUTING
SPLIT
JOG.MODE
SS
ENH.ON/OFF
3CH
RESET
PHONO
TUNER
CD
LINE
TAPE2
TAPE1
VIDEO
PRO.LOGIC
THEATER
HALL
CHURCH
DANCE
JAZZ
TUNING
CHARACTER
ENHANCER
DELAY
EFFECT
V.SEL
REC.SEL
TREBLE
BASS
BALANCE
HITS
D.ACCESS
4.8

Q1914–Q1918 Q1931 Q1932
Q1901–Q1908
Q1911 Q1910 Q1909

FRONT CONTROL assembly (AW


6
5
4
3
2
A
B
C
D
To OSD or TERMINAL assembly
CN41 (⬅ P51,P52)
To PS.U-COM assembly
CN29 (⬅ P75)
To PS.U-COM assembly
CN28 (⬅ P76)
AWZ3569
AXX1010
AEB1120
AVV1123A
ASS1022 -31.3 (VFDP)
4.8 (VREF)
PDG072
4.8
POWER
SP-A
SP-B
VCR1
VCR2
VCR3
LD
TV
VIDEO
TAPE1
TAPE2
LINE
CD
TUNER
PHONO
RESET
3CH
PRO.LOGIC
THEATER
HALL
CHURCH
DANCE
JAZZ
ENH.SEL
ACO.SEL
ACO/ENH.MEMO
ATT
SCEEN.MEMO
SCEEN1
SCEEN2
BAND
TUNE
CUSTOM SELECT
SCAN
MEMORY
NAME
AUTO/MONO
D.ACCESS
HITS
BALANCE
BASS
TREBLE
REC.SEL
V.SEL
TUNING
CHARACTER
ENHANCER
DELAY
EFFECT
Q1920 Q1919 Q1913 Q1912
IC1901
Q1911 Q1910 Q1909
Q1901 - Q1908
Q1914-Q1918 Q1931 Q1932

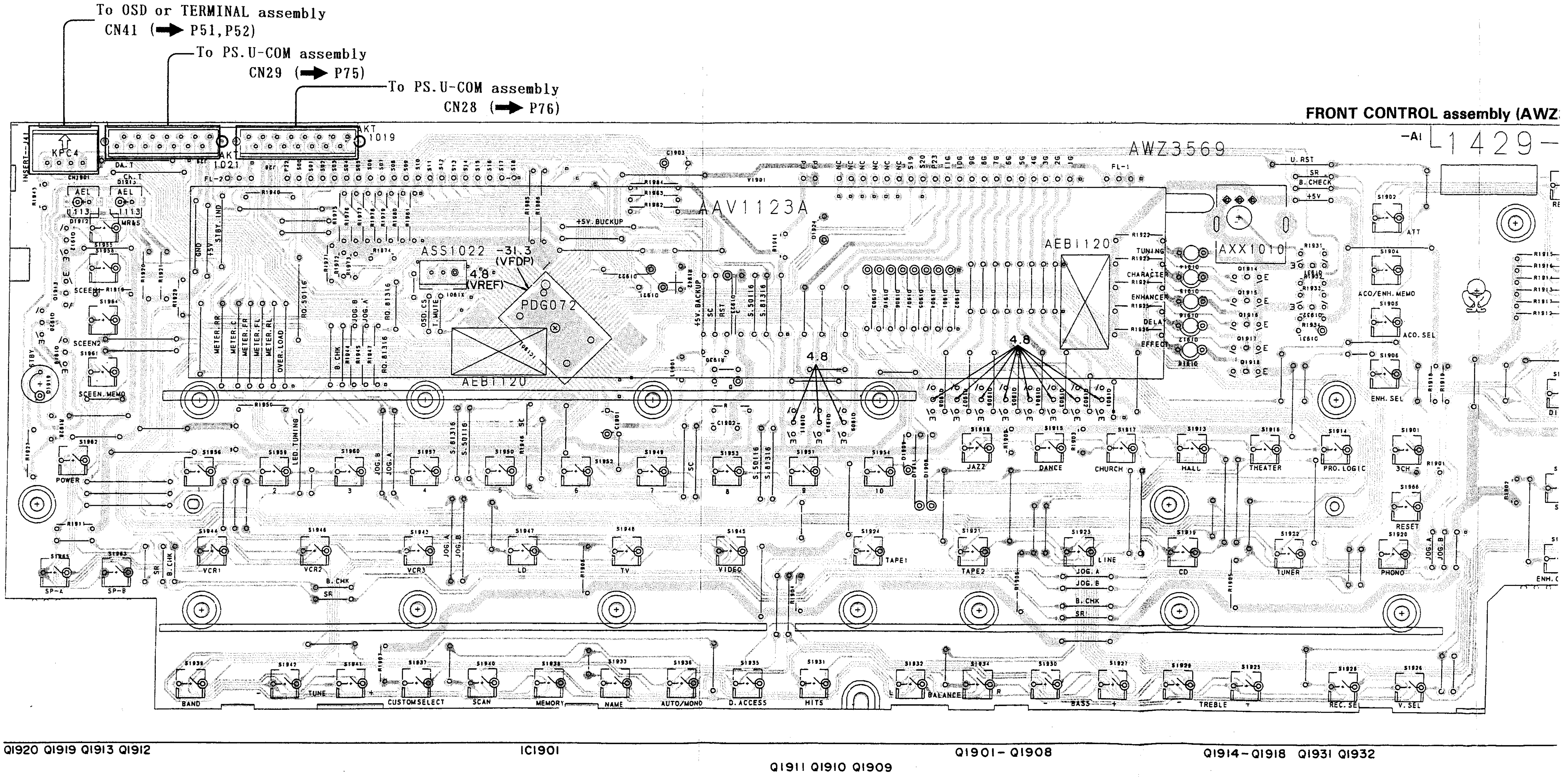
3.8 FRONT CONTROL (AWZ3569) and FRONT VIDEO assembly

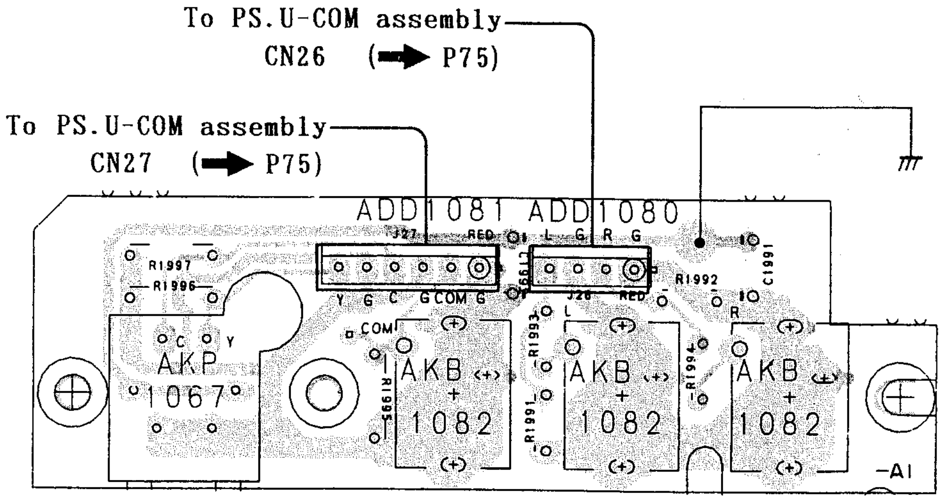
A

B

C

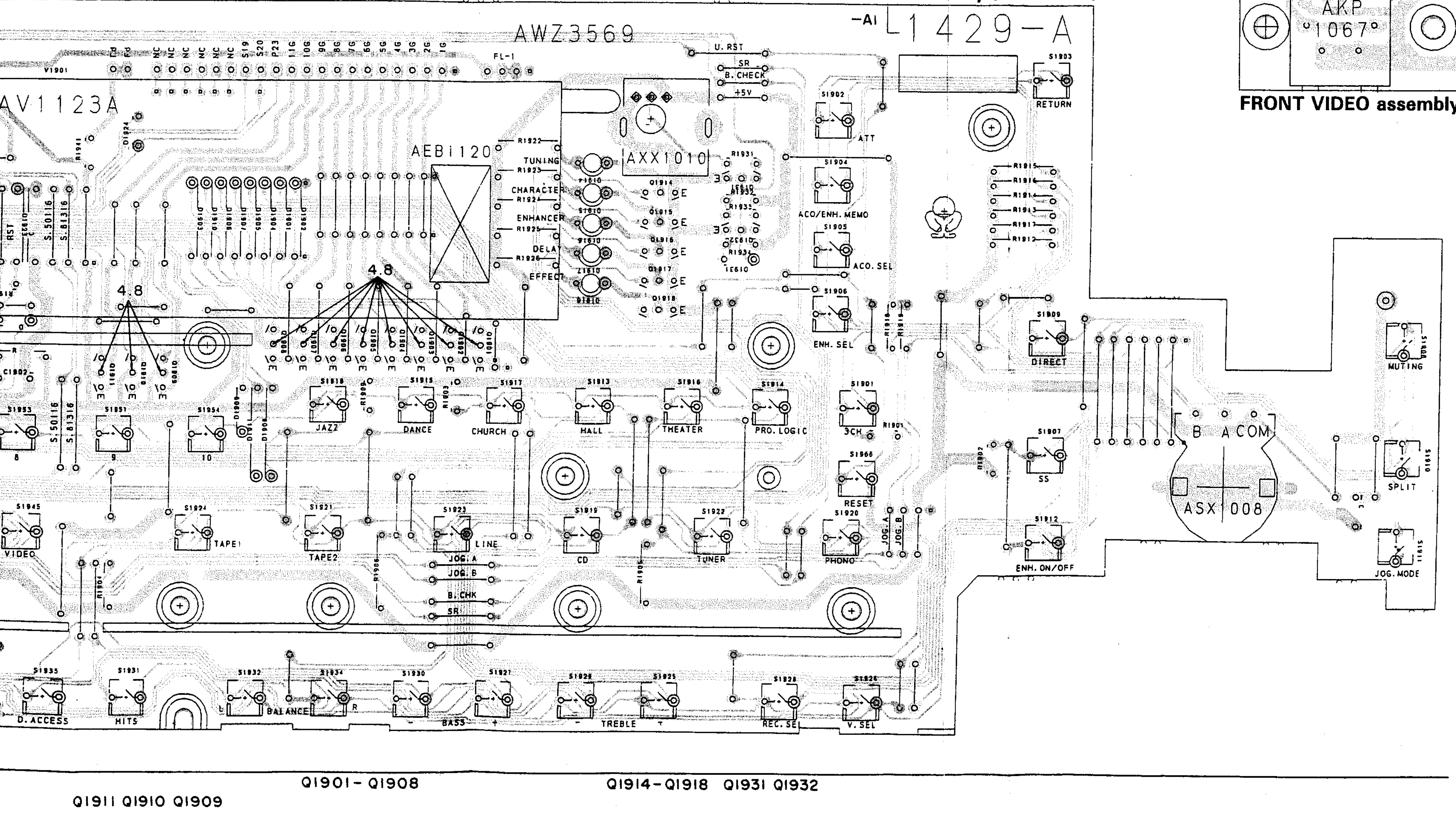
D


To OSD or TERMINAL assembly
CN41 (➡ P51,P52)
To PS.U-COM assembly
CN29 (➡ P75)
To PS.U-COM assembly
CN28 (➡ P76)
FRONT CONTROL assembly (AWZ
-AI 1429-
AWZ3569
AAV1123A
AKT 1019
AKT 1021
KPC4
CN1901
AEL 113
DA. T
Ch. T
FL-2
FL-1
V1901
ASS1022
-31.3 (VFDP)
4.8 (VREF)
PDG072
AEBI120
AEBi120
AXX1010
+5V. BUCKUP
GND
+5V
STBY. IND
METER. RR
METER. C
METER. FR
METER. FL
METER. RL
OVER. LOAD
RO. 50116
B. CHK
JOG. B
JOG. A
RO. 81316
OSD. CS
T. MUTE
+5V. BACKUP
SC
RST
S. 50116
S. 81316
4.8
4.8
U. RST
SR
B. CHECK
+5V
TUNING
CHARACTER
ENHANCER
DELAY
EFFECT
ATT
ACO/ENH. MEMO
ACO. SEL
ENH. SEL
SCEEN1
SCEEN2
SCEEN. MEMO
STBY
POWER
LED. TUNING
1
2
3
4
5
6
7
8
9
10
JAZZ
DANCE
CHURCH
HALL
THEATER
PRO. LOGIC
3CH
RESET
PHONO
ENH. C
SP-A
SP-B
SR
B. CHK
VCR1
VCR2
VCR3
LD
TV
VIDEO
TAPE1
TAPE2
LINE
JOG. A
JOG. B
B. CHK
SR
CD
TUNER
BAND
TUNE
CUSTOM SELECT
SCAN
MEMORY
NAME
AUTO/MONO
D. ACCESS
HITS
BALANCE
L
R
BASS
TREBLE
REC. SEL
V. SEL
Q1920 Q1919 Q1913 Q1912
IC1901
Q1911 Q1910 Q1909
Q1901 - Q1908
Q1914 - Q1918 Q1931 Q1932


To PS.U-COM assembly
CN26 (➡ P75)
To PS.U-COM assembly
CN27 (➡ P75)
ADD1081
ADD1080
J27
J28
RED
Y G C G COM G
L G R G
R1997
R1996
R1992
C1991
R1993
R1994
R1995
R1991
AKP 1067
AKB 1082
AKB 1082
AKB 1082
COM
-A1

FRONT VIDEO assembly

FRONT CONTROL assembly (AWZ3569)


-A1 L1429-A
AWZ3569
AV1123A
AEBi120
AXX1010
ASX1008
V1901
FL-1
U.RST
SR
B.CHECK
+5V
TUNING
CHARACTER
ENHANCER
DELAY
EFFECT
4.8
4.8
RETURN
ATT
ACO/ENH.MEMO
ACO.SEL
ENH.SEL
DIRECT
MUTING
SPLIT
JOG.MODE
3CH
RESET
SS
ENH.ON/OFF
PHONO
JOG.A
JOG.B
B.CHK
B A COM
JAZZ
DANCE
CHURCH
HALL
THEATER
PRO.LOGIC
VIDEO
TAPE1
TAPE2
LINE
CD
TUNER
D.ACCESS
HITS
BALANCE
BASS
TREBLE
REC.SE
V.SEL
Q1911 Q1910 Q1909
Q1901-Q1908
Q1914-Q1918 Q1931 Q1932

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

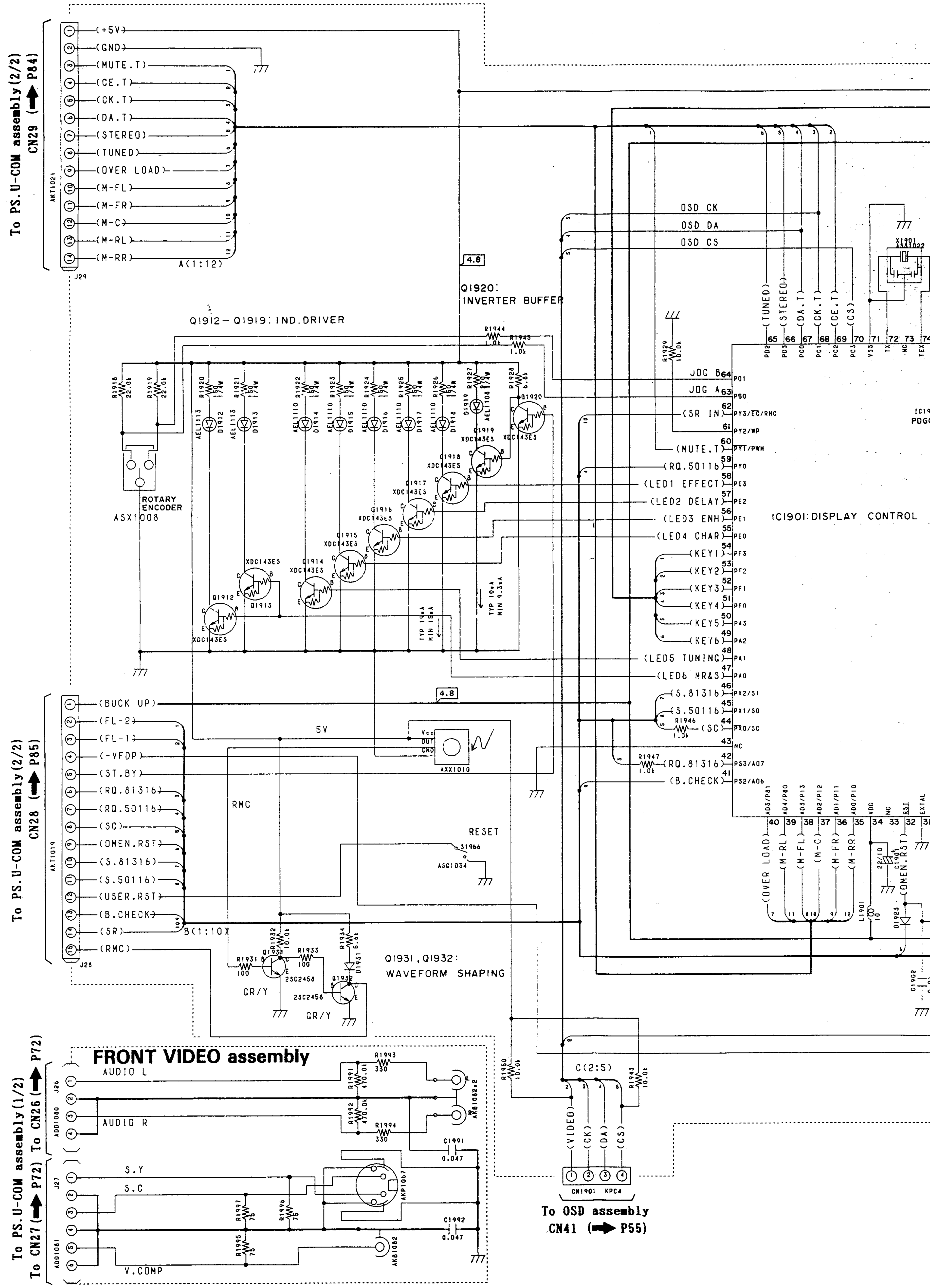
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
E 0504	E or E	Transistor
0215	or	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarity)
C518		Capacitor (Non-polarity)

Others

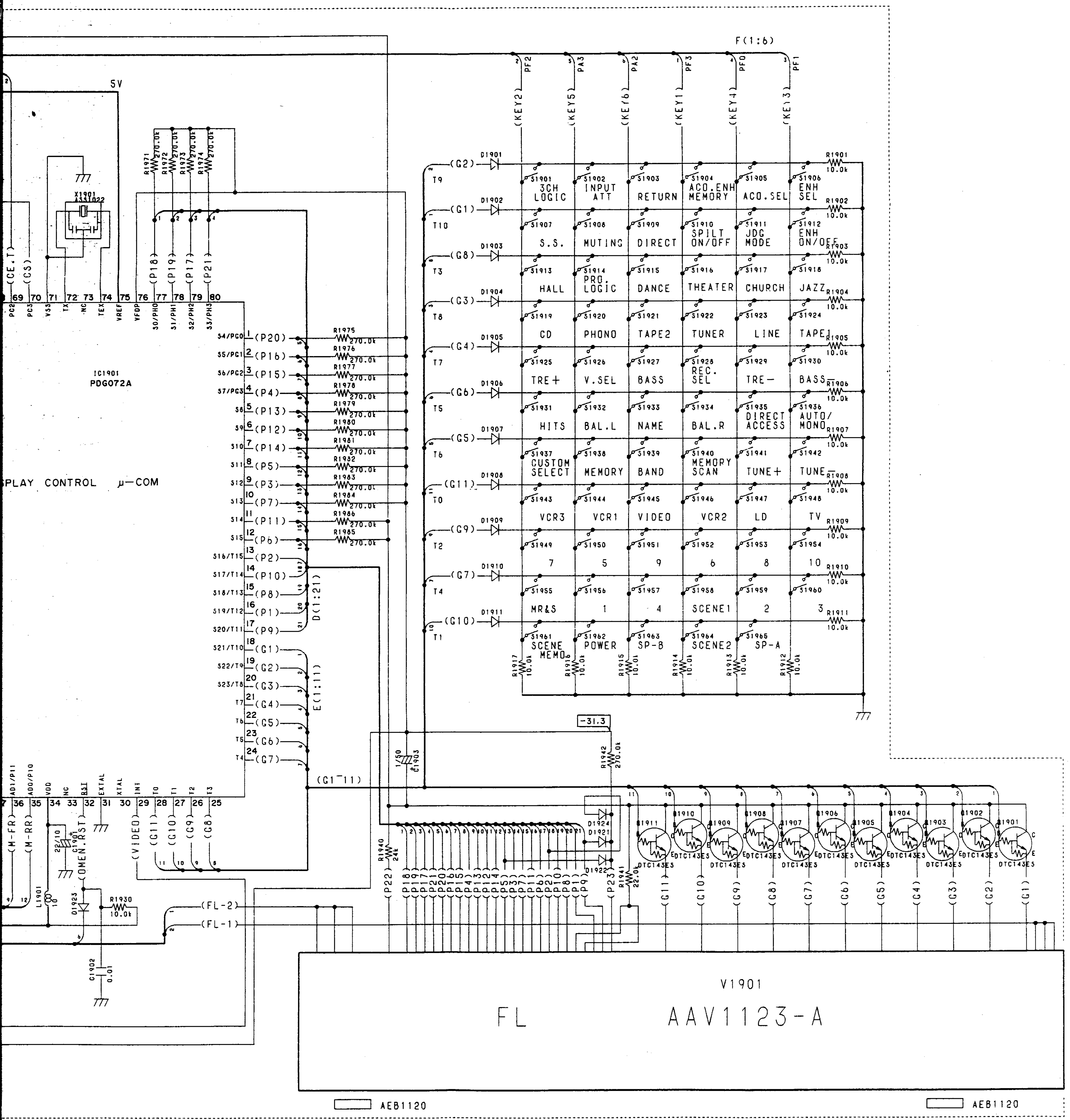
P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capactor terminal marked with ◎(double circles) shows negatine termianl.
4. The diode terminal marked with ◎(double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

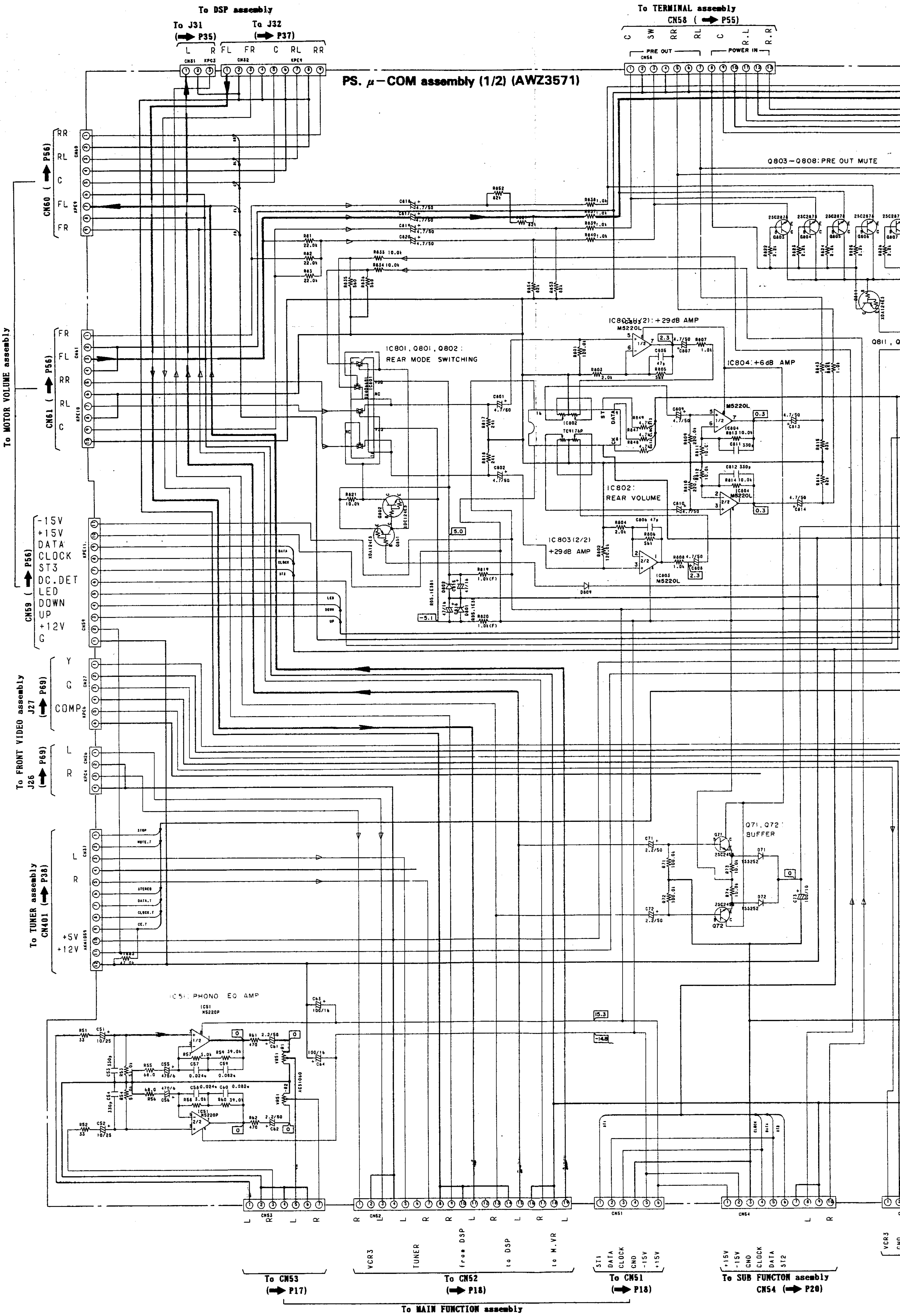
FRONT CONTROL assembly (AWZ3569)

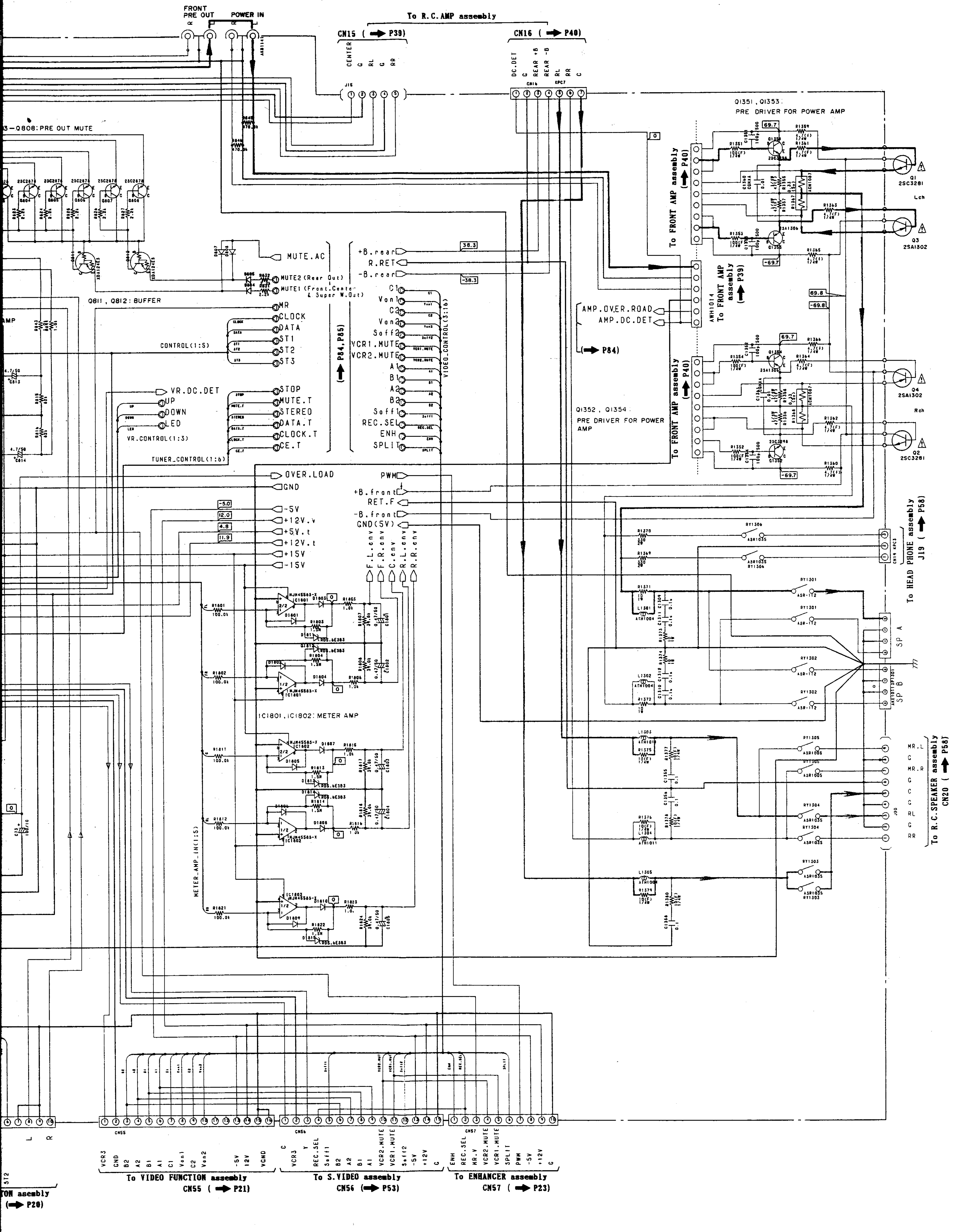


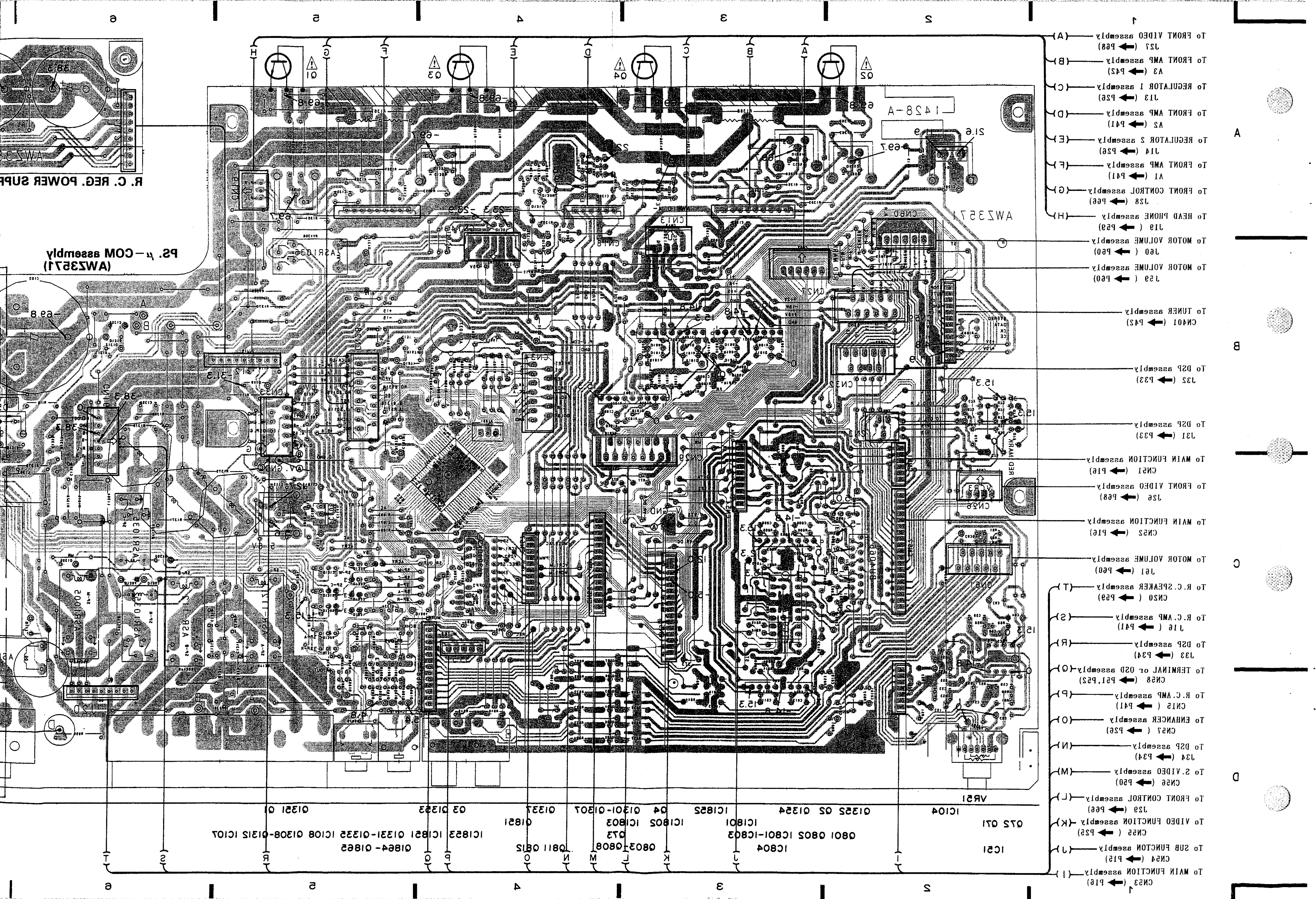
To PS.U-COM assembly(2/2) CN29 (→ P84)
AKT1021
J29
(+5V)
(GND)
(MUTE.T)
(CE.T)
(CK.T)
(DA.T)
(STEREO)
(TUNED)
(OVER LOAD)
(M-FL)
(M-FR)
(M-C)
(M-RL)
(M-RR)
A(1:12)
4.8
Q1920: INVERTER BUFFER
Q1912－Q1919: IND.DRIVER
R1944 1.0k
R1945 1.0k
R1918 22.0k
R1919 22.0k
R1920 150 1/4W
R1921 150 1/4W
R1922 150 1/4W
R1923 150 1/4W
R1924 150 1/4W
R1925 150 1/4W
R1926 150 1/4W
R1927 220 1/4W
R1928 6.8k
AEL1113 D1912
AEL1113 D1913
AEL1110 D1914
AEL1110 D1915
AEL1110 D1916
AEL1110 D1917
AEL1110 D1918
D1919 AEL1108
Q1920 XDC143ES
Q1919 XDC143ES
Q1918 XDC143ES
Q1917 XDC143ES
Q1916 XDC143ES
Q1915 XDC143ES
Q1914 XDC143ES
Q1913 XDC143ES
Q1912 XDC143ES
ROTARY ENCODER
ASX1008
TYP 19mA MIN 15mA
TYP 10mA MIN 9.3mA
R1929 10.0k
OSD CK
OSD DA
OSD CS
X1901 ASS1022
(TUNED)
(STEREO)
(DA.T)
(CK.T)
(CE.T)
(CS)
65 PD2
66 PD3
67 PC0
68 PC1
69 PC2
70 PC3
71 VSS
72 TX
73 NC
74 TEX
JOG B 64 P01
JOG A 63 P00
(SR IN) 62 PY3/EC/RMC
61 PY2/WP
(MUTE.T) 60 PY1/PWM
(RQ.50116) 59 PY0
(LED1 EFFECT) 58 PE3
(LED2 DELAY) 57 PE2
(LED3 ENH) 56 PE1
(LED4 CHAR) 55 PE0
(KEY1) 54 PF3
(KEY2) 53 PF2
(KEY3) 52 PF1
(KEY4) 51 PF0
(KEY5) 50 PA3
(KEY6) 49 PA2
(LED5 TUNING) 48 PA1
(LED6 MR&S) 47 PA0
(S.81316) 46 PX2/SI
(S.50116) 45 PX1/SO
R1946 1.0k (SC) 44 PX0/SC
43 NC
R1947 1.0k (RQ.81316) 42 PS3/A07
(B.CHECK) 41 PS2/A06
IC1901: DISPLAY CONTROL
IC19
PDG
40 AD3/P81
39 AD4/P80
38 AD3/P13
37 AD2/P12
36 AD1/P11
35 AD0/P10
34 VDD
33 NC
32 RST
31 EXTAL
(OVER LOAD)
(M-RL)
(M-FL)
(M-C)
(M-FR)
(M-RR)
22/10 C1901
(OMEN.RST)
L1901 10
D1923
C1902
To PS.U-COM assembly(2/2) CN28 (→ P85)
AKT1019
J28
(BUCK UP)
(FL-2)
(FL-1)
(-VFDP)
(ST.BY)
(RQ.81316)
(RQ.50116)
(SC)
(OMEN.RST)
(S.81316)
(S.50116)
(USER.RST)
(B.CHECK)
(SR)
(RMC)
B(1:10)
4.8
5V
Vcc
OUT
GND
AXX1010
RMC
RESET
S1966
ASG1034
R1932 10.0k
R1934 5.6k
R1931 100
R1933 100
Q1931 2SC2458
Q1932 2SC2458
D1951
GR/Y
Q1931, Q1932: WAVEFORM SHAPING
FRONT VIDEO assembly
To PS.U-COM assembly(1/2) To CN26 (→ P72)
J26
ADD1080
AUDIO L
AUDIO R
R1993 330
R1991 470.0k
R1992 470.0k
R1994 330
AKB1082×2
C1991 0.047
To PS.U-COM assembly(1/2) To CN27 (→ P72)
J27
ADD1081
S.Y
S.C
V.COMP
R1997 75
R1996 75
R1995 75
AKP1067
AKB1082
C1992 0.047
R1950 10.0k
R1943 10.0k
C(2:5)
(VIDEO)
(CK)
(DA)
(CS)
CN1901 KPC4
To OSD assembly CN41 (→ P55)

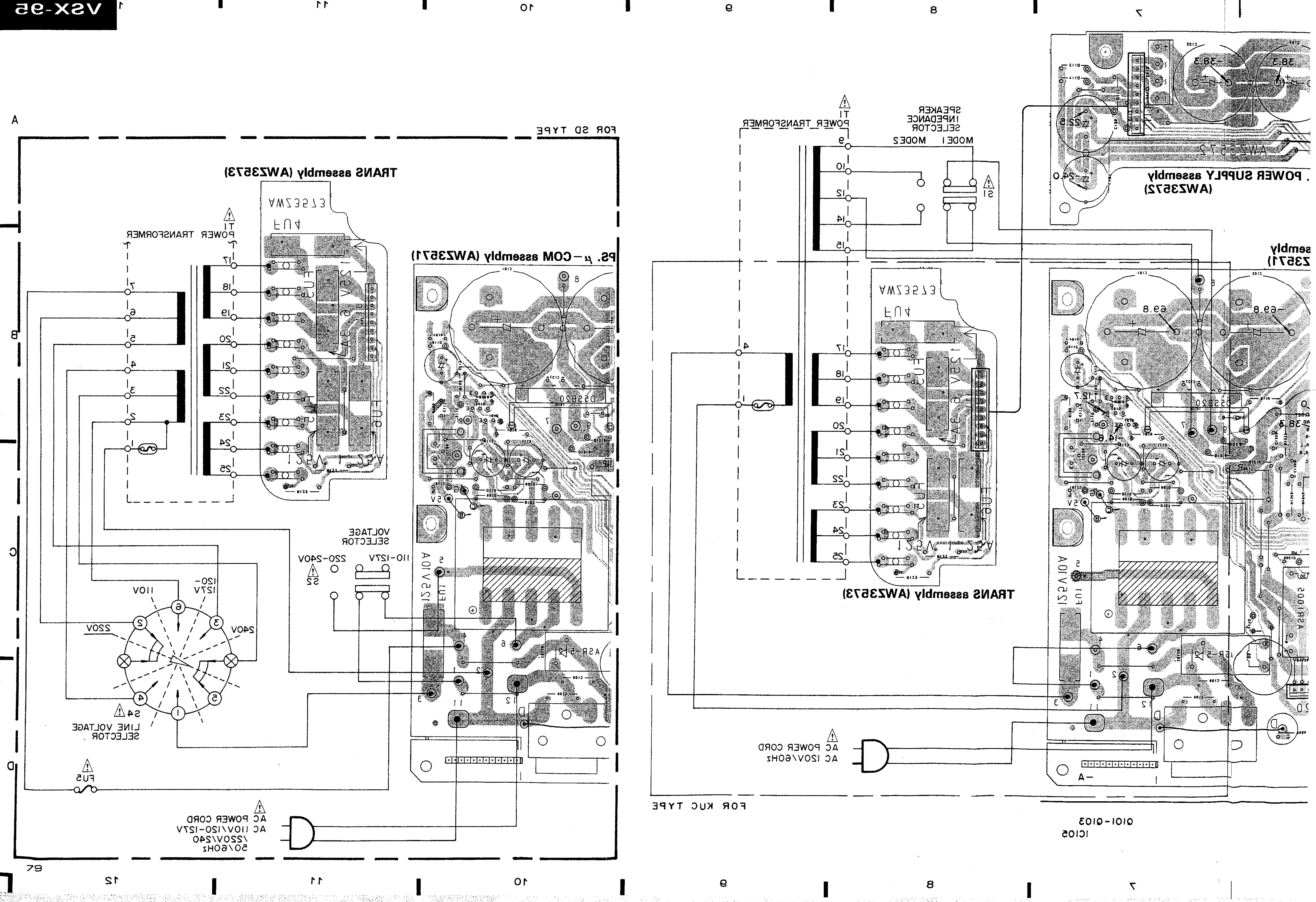

F(1:6)
(KEY2) PF2
(KEY5) PA3
(KEY6) PA2
(KEY1) PF3
(KEY4) PF0
(KEY3) PF1
5V
X1901 ASS1022
R1971 R1972 R1973 R1974 270.0k
(CE.T) (CS) (P18) (P19) (P17) (P21)
IC1901
PDG072A
PLAY CONTROL µ-COM
(P20) (P16) (P15) (P4) (P13) (P12) (P14) (P5) (P3) (P7) (P11) (P6) (P2) (P10) (P8) (P1) (P9)
(G1) (G2) (G3) (G4) (G5) (G6) (G7)
R1975–R1986 270.0k
D(1:21)
E(1:11)
(G1~11)
D1901 (G2) T9
D1902 (G1) T10
D1903 (G8) T3
D1904 (G3) T8
D1905 (G4) T7
D1906 (G6) T5
D1907 (G5) T6
D1908 (G11) T0
D1909 (G9) T2
D1910 (G7) T4
D1911 (G10) T1
S1901 3CH LOGIC
S1902 INPUT ATT
S1903 RETURN
S1904 ACO.ENH MEMORY
S1905 ACO.SEL
S1906 ENH SEL
S1907 S.S.
S1908 MUTING
S1909 DIRECT
S1910 SPILT ON/OFF
S1911 JDG MODE
S1912 ENH ON/OFF
S1913 HALL
S1914 PRO. LOGIC
S1915 DANCE
S1916 THEATER
S1917 CHURCH
S1918 JAZZ
S1919 CD
S1920 PHONO
S1921 TAPE2
S1922 TUNER
S1923 LINE
S1924 TAPE1
S1925 TRE+
S1926 V.SEL
S1927 BASS
S1928 REC. SEL
S1929 TRE−
S1930 BASS−
S1931 HITS
S1932 BAL.L
S1933 NAME
S1934 BAL.R
S1935 DIRECT ACCESS
S1936 AUTO/ MONO
S1937 CUSTOM SELECT
S1938 MEMORY
S1939 BAND
S1940 MEMORY SCAN
S1941 TUNE+
S1942 TUNE−
S1943 VCR3
S1944 VCR1
S1945 VIDEO
S1946 VCR2
S1947 LD
S1948 TV
S1949 7
S1950 5
S1951 9
S1952 6
S1953 8
S1954 10
S1955 MR&S
S1956 1
S1957 4
S1958 SCENE1
S1959 2
S1960 3
S1961 SCENE MEMO
S1962 POWER
S1963 SP-B
S1964 SCENE2
S1965 SP-A
R1901–R1911 10.0k
R1912–R1917 10.0k
−31.3
R1942 270.0k
C1903 1/50
D1921 D1922 D1924
R1940 24k
R1941 22.0k
Q1901–Q1911 DTC143ES
(G11) (G10) (G9) (G8) (G7) (G6) (G5) (G4) (G3) (G2) (G1)
(P22) (P18) (P19) (P17) (P21) (P20) (P15) (P16) (P4) (P13) (P12) (P14) (P5) (P3) (P7) (P11) (P6) (P2) (P10) (P8) (P1) (P9) (P23)
(M-FR) (M-RR) (OMEN.RST) (VIDEO) (G11) (G10) (G9) (G8)
C1901 22/10
L1901
D1923
R1930 10.0k
C1902 0.01
(FL-2) (FL-1)
V1901
FL AAV1123-A
AEB1120
AEB1120

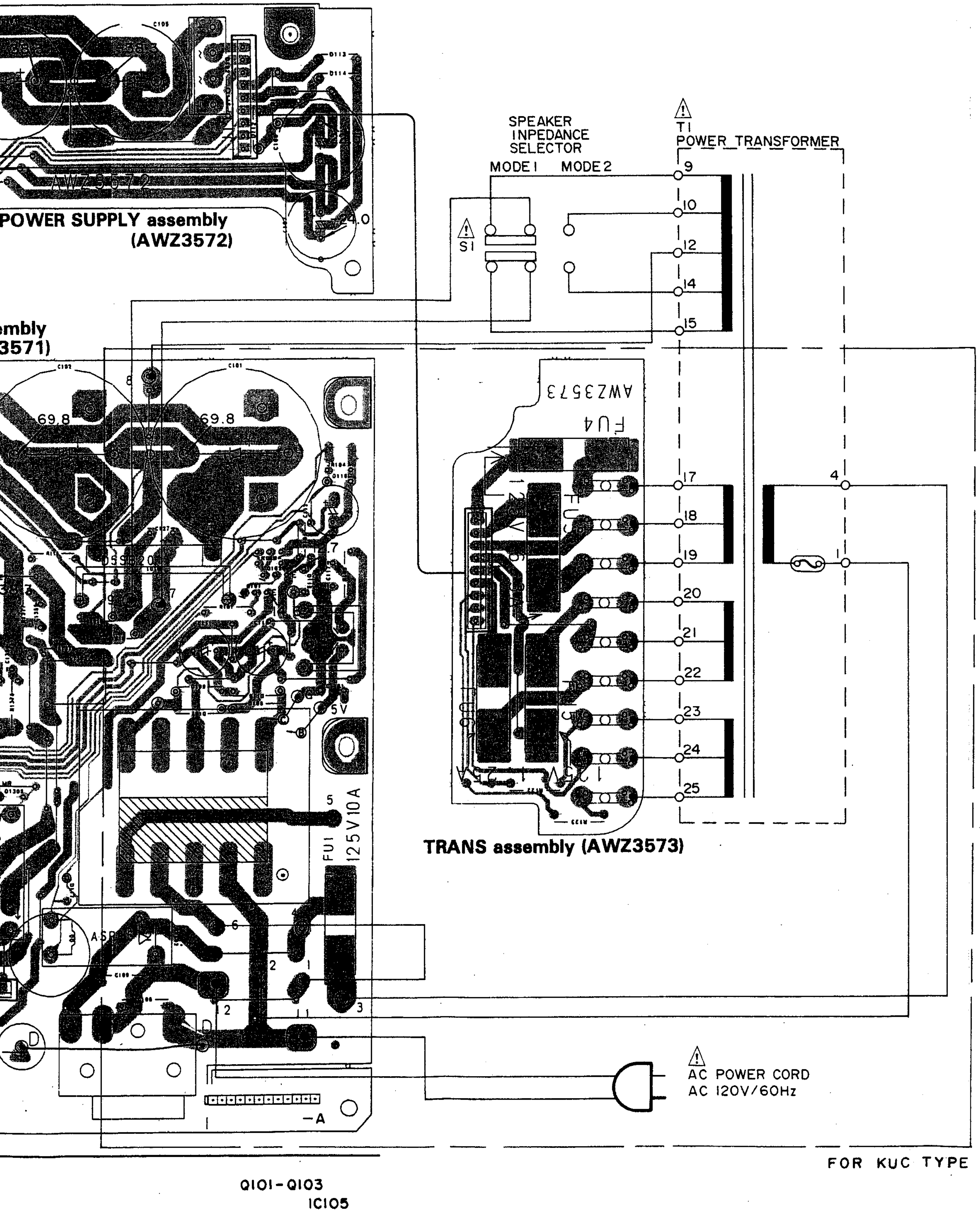
3.9 PS. μ-COM (AWZ3571), R. C. REG POWER SUPPLY (AWZ3572) and TRANS assembly (AWZ3573)

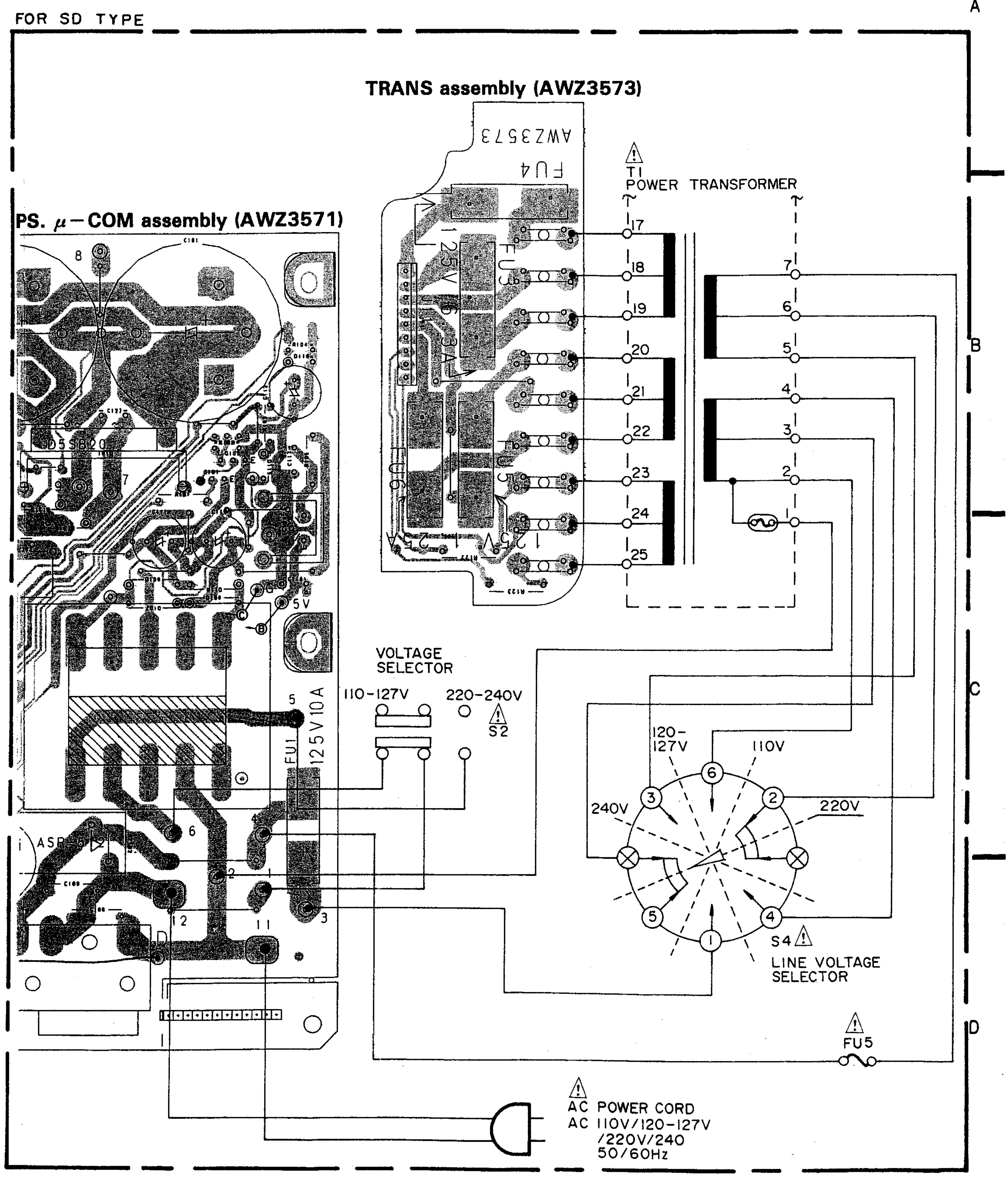

To DSP assembly
To J31 (➡ P35)
To J32 (➡ P37)
L R FL FR C RL RR
CN51 KPC3 CN52 KPE9
PS. μ-COM assembly (1/2) (AWZ3571)
To TERMINAL assembly
CN58 (➡ P55)
C SW RR RL C R.L R.R
PRE OUT
POWER IN
Q803-Q808: PRE OUT MUTE
2SC2878
To MOTOR VOLUME assembly
CN60 (⬆ P56)
RR RL C FL FR
CN61 (⬆ P56)
FR FL RR RL C
IC801, Q801, Q802: REAR MODE SWITCHING
IC803(1/2): +29dB AMP
M5220L
IC804: +6dB AMP
IC802: REAR VOLUME
TC9176P
IC803(2/2) +29dB AMP
CN59 (⬆ P56)
-15V +15V DATA CLOCK ST3 DC.DET LED DOWN UP +12V G
To FRONT VIDEO assembly
J27 (⬆ P69)
Y G COMP
J26 (⬆ P69)
L R
To TUNER assembly
CN401 (⬆ P38)
L R +5V +12V
STOP MUTE.T STEREO DATA.T CLOCK.T CE.T
Q71, Q72: BUFFER
2SC2458
1SS252
IC51: PHONO EQ AMP
M5220P
15.3
-14.8
CN53 CN52 CN51 CN54
VCR3 TUNER from DSP to DSP to M.VR
ST1 DATA CLOCK GND -15V +15V
+15V -15V GND CLOCK DATA ST2
To CN53 (➡ P17)
To CN52 (➡ P18)
To CN51 (➡ P18)
To SUB FUNCTON assembly CN54 (➡ P20)
To MAIN FUNCTION assembly
A B C D E F
1 2 3 4 5

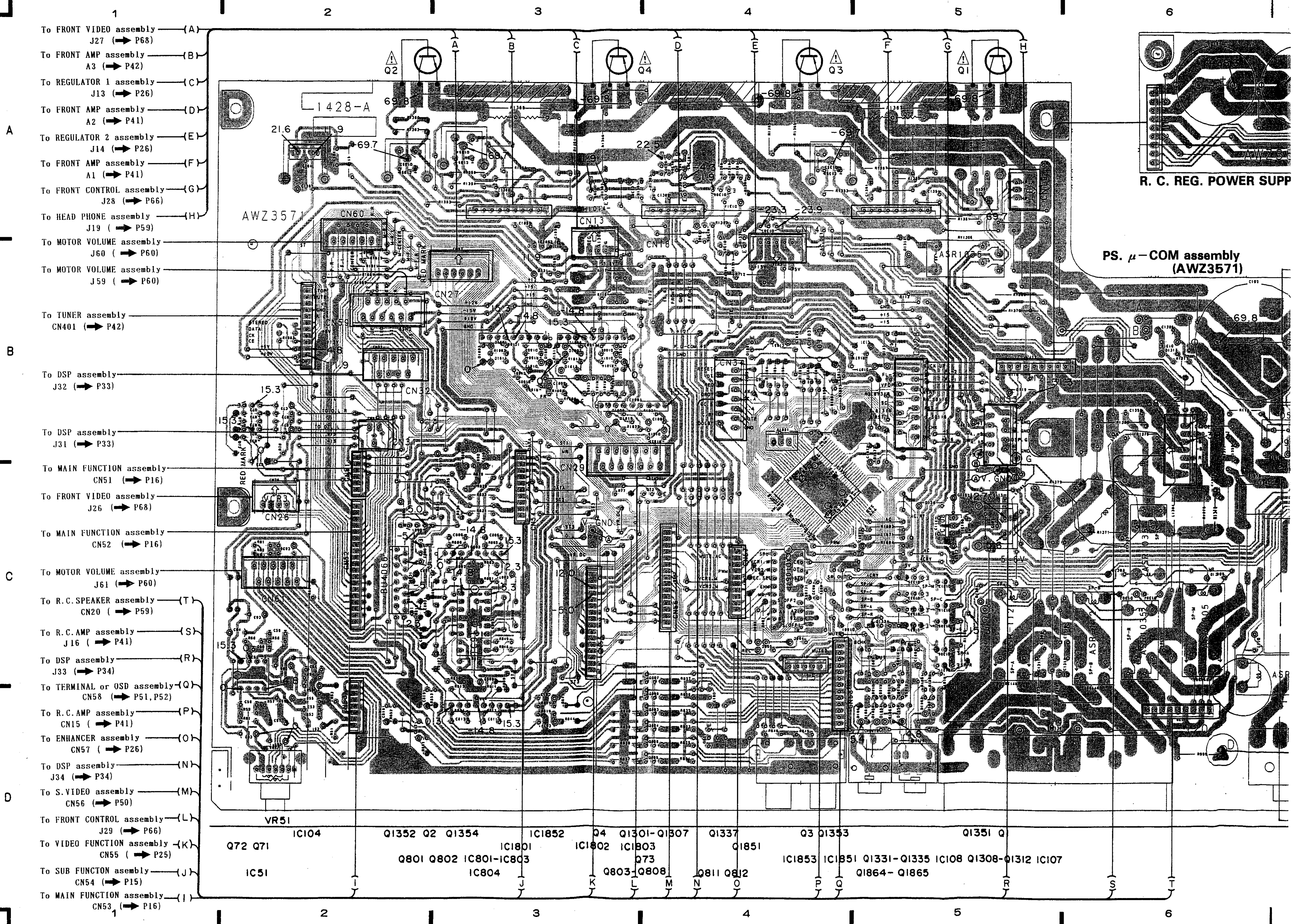

FRONT PRE OUT
POWER IN
To R.C.AMP assembly
CN15 (➡ P39)
CENTER G RL G RR
CN16 (➡ P40)
DC.DET G REAR +B REAR -B RL RR C
Q1351, Q1353: PRE DRIVER FOR POWER AMP
Q1352, Q1354: PRE DRIVER FOR POWER AMP
To FRONT AMP assembly (➡ P40)
To FRONT AMP assembly (➡ P39)
AWH1014
2SC3281
2SA1302
Lch
Rch
Q1
Q2
Q3
Q4
69.7
-69.7
69.8
-69.8
Q803–Q808: PRE OUT MUTE
Q811, Q812: BUFFER
MUTE.AC
MUTE2 (Rear Out)
MUTE1 (Front, Center & Super W.Out)
MR
CLOCK
DATA
ST1
ST2
ST3
CONTROL(1:5)
VR.DC.DET
UP
DOWN
LED
VR.CONTROL(1:3)
STOP
MUTE.T
STEREO
DATA.T
CLOCK.T
CE.T
TUNER_CONTROL(1:6)
+B.rear
R.RET
-B.rear
38.3
-38.3
C1
Von1
C2
Von2
Soff2
VCR1.MUTE
VCR2.MUTE
A1
B1
A2
B2
Soff1
REC.SEL
ENH
SPLIT
VIDEO_CONTROL(3:16)
(➡ P84, P85)
AMP.OVER.ROAD
AMP.DC.DET
(➡ P84)
OVER.LOAD
GND
PWM
+B.front
RET.F
-B.front
GND(5V)
-5V
+12V.v
+5V.t
+12V.t
+15V
-15V
-5.0
12.0
4.8
11.9
F.L.env
F.R.env
C.env
R.L.env
R.R.env
IC1801, IC1802: METER AMP
NJM4556S-X
METER_AMP_IN(1:5)
To HEAD PHONE assembly J19 (➡ P58)
SP A
SP B
RY1301
RY1302
RY1303
RY1304
RY1305
RY1306
ASR-1T2
ASR1035
ATH1004
ATH1011
MR.L
G
MR.R
G
C
RL
G
RR
To R.C.SPEAKER assembly CN20 (➡ P58)
CN55
VCR3 GND B2 A2 B1 A1 C1 Von1 C2 Von2 -5V 12V VGND
To VIDEO FUNCTION assembly CN55 (➡ P21)
CN56
G VCR3 Y REC.SEL Soff1 B2 A2 B1 A1 VCR2.MUTE VCR1.MUTE Soff2 -5V +12V G
To S.VIDEO assembly CN56 (➡ P53)
CN57
ENH REC.SEL MR.V VCR2.MUTE VCR1.MUTE SPLIT PWM -5V +12V G
To ENHANCER assembly CN57 (➡ P23)
ST2
TON assembly (➡ P20)

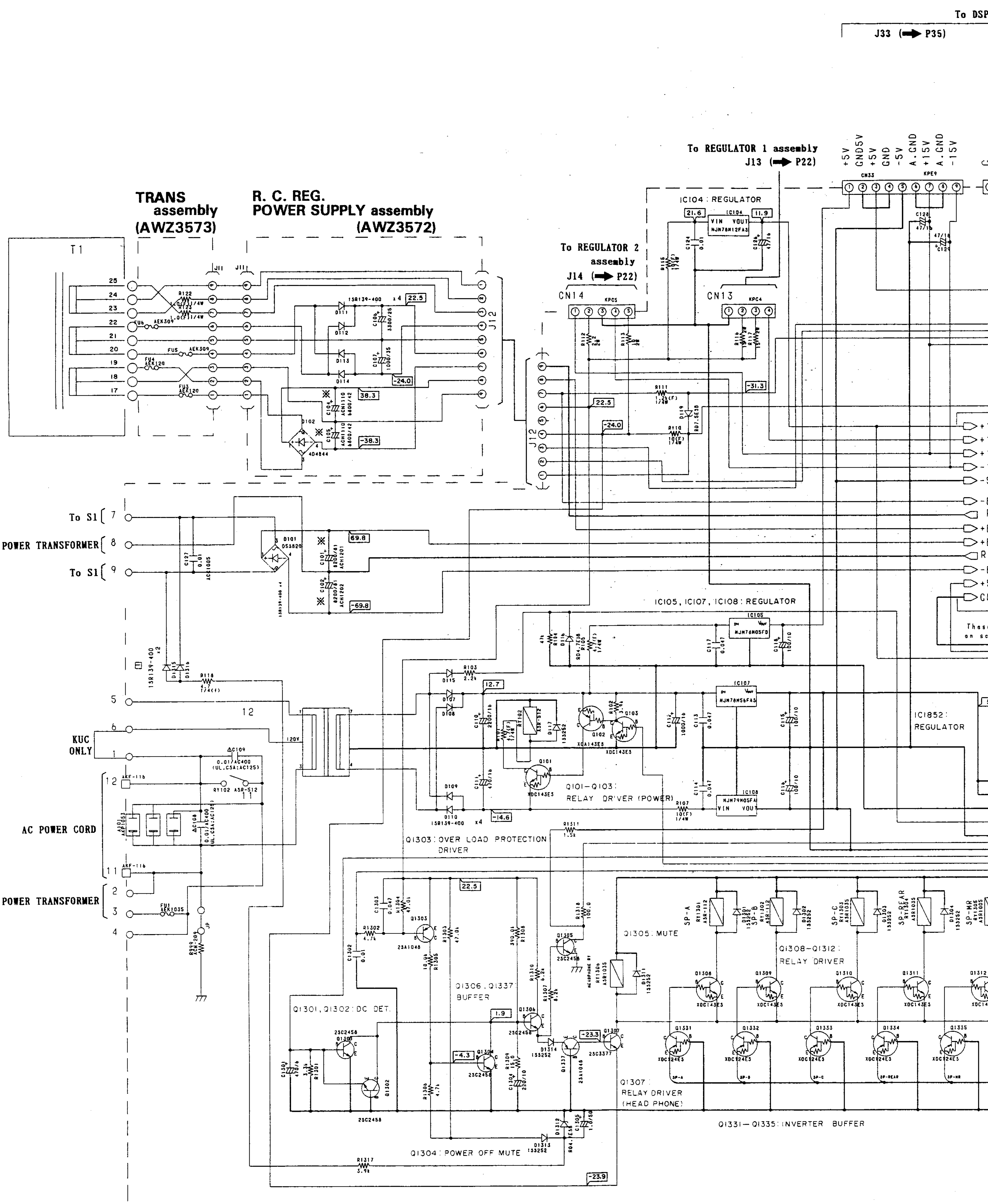

R. C. REG. POWER SUPP
PS. μ-COM assembly
(AWZ3571)
1428-A
AWZ3571
(A) To FRONT VIDEO assembly J27 (← P68)
(B) To FRONT AMP assembly A3 (← P42)
(C) To REGULATOR 1 assembly J13 (← P26)
(D) To FRONT AMP assembly A2 (← P41)
(E) To REGULATOR 2 assembly J14 (← P26)
(F) To FRONT AMP assembly A1 (← P41)
(G) To FRONT CONTROL assembly J28 (← P66)
(H) To HEAD PHONE assembly J19 (← P59)
To MOTOR VOLUME assembly J60 (← P60)
To MOTOR VOLUME assembly J59 (← P60)
To TUNER assembly CN401 (← P42)
To DSP assembly J32 (← P33)
To DSP assembly J31 (← P33)
To MAIN FUNCTION assembly CN51 (← P16)
To FRONT VIDEO assembly J26 (← P68)
To MAIN FUNCTION assembly CN52 (← P16)
To MOTOR VOLUME assembly J61 (← P60)
(T) To R.C.SPEAKER assembly CN20 (← P59)
(S) To R.C.AMP assembly J16 (← P41)
(R) To DSP assembly J33 (← P34)
(Q) To TERMINAL or OSD assembly CN58 (← P51,P52)
(P) To R.C.AMP assembly CN15 (← P41)
(O) To ENHANCER assembly CN57 (← P26)
(N) To DSP assembly J34 (← P34)
(M) To S.VIDEO assembly CN56 (← P50)
(L) To FRONT CONTROL assembly J29 (← P66)
(K) To VIDEO FUNCTION assembly CN55 (← P25)
(J) To SUB FUNCTION assembly CN54 (← P15)
(I) To MAIN FUNCTION assembly CN53 (← P16)
Q1 Q1351
Q3 Q1353
Q1337
Q1301-Q1307
Q4
IC1852
Q1354
Q2 Q1352
IC104
VR51
IC107 Q1308-Q1312 IC108 Q1331-Q1335 IC1851 IC1853
Q1864-Q1865
Q1851
IC1802 IC1803
Q73
Q811 Q812
Q803-Q808
IC1801
Q801 Q802 IC801-IC803
IC804
Q72 Q71
IC51
Q1
Q2
Q3
Q4
1
2
3
4
5
6
A
B
C
D


FOR SD TYPE
TRANS assembly (AWZ3573)
PS. µ-COM assembly (AWZ3571)
T1 POWER TRANSFORMER
VOLTAGE SELECTOR
110-127V
220-240V
S2
LINE VOLTAGE SELECTOR
S4
110V
120-127V
220V
240V
FU5
AC POWER CORD
AC 110V/120-127V/220V/240
50/60Hz
FOR KUC TYPE
SPEAKER IMPEDANCE SELECTOR
MODE1
MODE2
S1
POWER SUPPLY assembly (AWZ3572)
AC POWER CORD
AC 120V/60Hz
Q101-Q103
IC105
FU1 125V10A
D5SB20
69.8
-69.8
38.3
-38.3
22.5
-24.0
12.7
-14.6
5V
ASR-5
A
B
C
D
12
11
10
9
8
7


POWER SUPPLY assembly
(AWZ3572)
mbly
3571)
SPEAKER
INPEDANCE
SELECTOR
MODE1
MODE2
S1
T1
POWER TRANSFORMER
9
10
12
14
15
AWZ3573
FU4
17
18
19
20
21
22
23
24
25
4
1
TRANS assembly (AWZ3573)
69.8
69.8
5V
5
FU1
125V10A
6
2
1
3
11
12
-A
AC POWER CORD
AC 120V/60Hz
FOR KUC TYPE
Q101-Q103
IC105


FOR SD TYPE
TRANS assembly (AWZ3573)
AWZ3573
FU4
T1
POWER TRANSFORMER
PS. μ-COM assembly (AWZ3571)
17
18
19
20
21
22
23
24
25
7
6
5
4
3
2
1
5V
5
FU1
125V10A
6
2
1
3
11
12
VOLTAGE
SELECTOR
110-127V
220-240V
S2
120-127V
110V
240V
220V
S4
LINE VOLTAGE
SELECTOR
FU5
AC POWER CORD
AC 110V/120-127V
/220V/240
50/60Hz


PS. μ−COM assembly
(AWZ3571)
R. C. REG. POWER SUPP
AWZ3571
1428-A
Q2
Q4
Q3
Q1
To FRONT VIDEO assembly J27 (→ P68) A
To FRONT AMP assembly A3 (→ P42) B
To REGULATOR 1 assembly J13 (→ P26) C
To FRONT AMP assembly A2 (→ P41) D
To REGULATOR 2 assembly J14 (→ P26) E
To FRONT AMP assembly A1 (→ P41) F
To FRONT CONTROL assembly J28 (→ P66) G
To HEAD PHONE assembly J19 (→ P59) H
To MOTOR VOLUME assembly J60 (→ P60)
To MOTOR VOLUME assembly J59 (→ P60)
To TUNER assembly CN401 (→ P42)
To DSP assembly J32 (→ P33)
To DSP assembly J31 (→ P33)
To MAIN FUNCTION assembly CN51 (→ P16)
To FRONT VIDEO assembly J26 (→ P68)
To MAIN FUNCTION assembly CN52 (→ P16)
To MOTOR VOLUME assembly J61 (→ P60)
To R.C.SPEAKER assembly CN20 (→ P59) T
To R.C.AMP assembly J16 (→ P41) S
To DSP assembly J33 (→ P34) R
To TERMINAL or OSD assembly CN58 (→ P51,P52) Q
To R.C.AMP assembly CN15 (→ P41) P
To ENHANCER assembly CN57 (→ P26) O
To DSP assembly J34 (→ P34) N
To S.VIDEO assembly CN56 (→ P50) M
To FRONT CONTROL assembly J29 (→ P66) L
To VIDEO FUNCTION assembly CN55 (→ P25) K
To SUB FUNCTON assembly CN54 (→ P15) J
To MAIN FUNCTION assembly CN53 (→ P16) I
CN60
CN27
CN59
CN32
CN13
CN18
CN37
CN29
CN26
CN61
VR51
IC104
Q72 Q71
IC51
Q1352 Q2 Q1354
Q801 Q802 IC801−IC803
IC804
IC1801
IC1852
Q4
IC1802
IC1803
Q1301−Q1307
Q73
Q803−Q808
Q811 Q812
Q1337
Q1851
Q3 Q1353
IC1853 IC1851 Q1331−Q1335 IC108 Q1308−Q1312 IC107
Q1864− Q1865
Q1351 Q1
1
2
3
4
5
6
A
B
C
D


To DSP
J33 (➡ P35)
To REGULATOR 1 assembly
J13 (➡ P22)
+5V
GND5V
+5V
GND
-5V
A.GND
+15V
A.GND
-15V
CN33
KPE9
TRANS
assembly
(AWZ3573)
R. C. REG.
POWER SUPPLY assembly
(AWZ3572)
T1
J11
J12
IC104 : REGULATOR
NJM78M12FA
To REGULATOR 2
assembly
J14 (➡ P22)
CN14
KPC5
CN13
KPC4
22.5
-24.0
38.3
-38.3
-31.3
To S1
To POWER TRANSFORMER
To S1
69.8
-69.8
IC105, IC107, IC108 : REGULATOR
NJM78M05FD
NJM78M05FA
NJM79M05FA
IC1852 :
REGULATOR
12.7
-14.6
12
120V
KUC
ONLY
AC POWER CORD
To POWER TRANSFORMER
Q101–Q103 :
RELAY DRIVER (POWER)
Q1303 : OVER LOAD PROTECTION
DRIVER
Q1305 : MUTE
Q1308–Q1312 :
RELAY DRIVER
SP-A
SP-B
SP-C
SP-REAR
SP-MR
Q1301, Q1302 : DC DET.
Q1306, Q1337 :
BUFFER
Q1307 :
RELAY DRIVER
(HEAD PHONE)
Q1331 – Q1335 : INVERTER BUFFER
Q1304 : POWER OFF MUTE
22.5
1.9
-4.3
-23.3
-23.9

PS. μ-COM assembly (2/2) (AWZ3571)

• **LOGIC TABLE FOR VIDEO CONTROL SECTION**

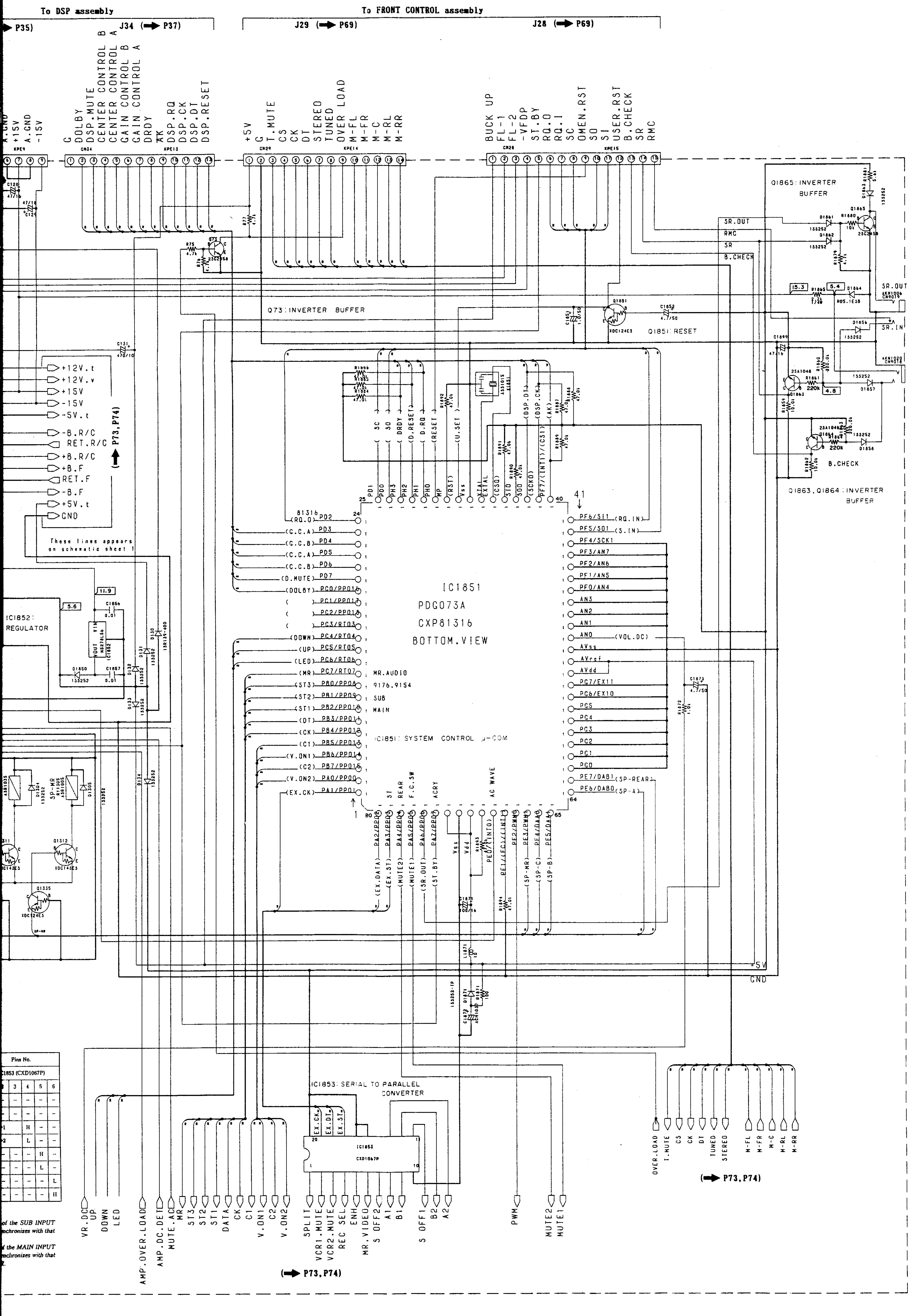
Input Selector Condition		Pins No.															
		IC1853 (CXD1067P)												IC1851 (PDG073A)			
		1	2	3	4	5	6	7	8	9	11	12	13	2	3	4	5
MAIN	VCR1	–	H	L	–	–	–	–	L	L	L	–	–	–	–	L	H
	VCR2	–	L	H	–	–	–	–	H	H	L	–	–	–	–	L	H
	VCR3	–	L	L	–	–	–	–	L	H	L	–	–	–	–	L	L
	LD	–	L	L	–	–	–	–	H	L	L	–	–	–	–	L	H
	TV	–	L	L	–	–	–	–	L	L	H	–	–	–	–	L	L
	VIDEO	–	L	L	–	–	–	–	H	L	H	–	–	–	–	L	L
	AUDIO (CD···etc)	–	L	L	–	–	–	–	–	–	H	–	–	–	–	H	–
SUB	VCR1	–	H	L	–	–	–	L	–	–	–	L	L	L	H	–	–
	VCR2	–	L	H	–	–	–	L	–	–	–	H	H	L	H	–	–
	VCR3	–	L	L	–	–	–	L	–	–	–	H	L	L	L	–	–
	LD	–	L	L	–	–	–	L	–	–	–	L	H	L	H	–	–
	TV	–	L	L	–	–	–	H	–	–	–	L	L	L	L	–	–
	VIDEO	–	L	L	–	–	–	H	–	–	–	L	H	L	L	–	–
	AUDIO (CD···etc)	–	L	L	–	–	–	H	–	–	–	–	–	H	–	–	–

Switches Condition		Pins No.					
		IC1853 (CXD1067P)					
		1	2	3	4	5	6
SPLIT SCREEN	ON	H	–	–	–	–	–
	OFF	L	–	–	–	–	–
REC SEL	ON	–	*1		H	–	–
	OFF	–	*2		L	–	–
ENHANCER	ON	–	–	–	–	H	–
	OFF	–	–	–	–	L	–
MRS	ON	–	–	–	–	–	L
	OFF	–	–	–	–	–	H

Note)

**1 : Changes according to the status of the SUB INPUT SELECTOR. The status of H/L synchronizes with that of the SUB INPUT SELECTOR.*

**2 : Changes according to the status of the MAIN INPUT SELECTOR. The status of H/L synchronizes with that of the MAIN INPUT SELECTOR.*


To DSP assembly
P35)
J34 (➡ P37)
To FRONT CONTROL assembly
J29 (➡ P69)
J28 (➡ P69)
A.GND
+15V
A.GND
-15V
KPE9
G
DOLBY
DSP.MUTE
CENTER CONTROL B
CENTER CONTROL A
GAIN CONTROL B
GAIN CONTROL A
DRDY
AK
DSP.RQ
DSP.CK
DSP.DT
DSP.RESET
CN34
KPE13
+5V
G
T.MUTE
CS
CK
DT
STEREO
TUNED
OVER LOAD
M-FL
M-FR
M-C
M-RL
M-RR
CN29
KPE14
BUCK UP
FL-1
FL-2
-VFDP
ST.BY
RQ.0
RQ.1
SC
OMEN.RST
SO
SI
USER.RST
B.CHECK
SR
RMC
CN28
KPE15
Q1865: INVERTER BUFFER
SR.OUT
RMC
SR
B.CHECK
Q73: INVERTER BUFFER
Q1851: RESET
SR.OUT
SR.IN
B.CHECK
Q1863, Q1864: INVERTER BUFFER
+12V.t
+12V.v
+15V
-15V
-5V.t
-B.R/C
RET.R/C
+B.R/C
+B.F
RET.F
-B.F
+5V.t
GND
(➡ P73, P74)
These lines appears on schematic sheet 1
IC1852: REGULATOR
11.9
5.6
15.3
5.4
4.8
IC1851
PDG073A
CXP81316
BOTTOM.VIEW
IC1851: SYSTEM CONTROL μ-COM
MR.AUDIO
9176, 9154
SUB
MAIN
(RQ.0) PD2
(G.C.A) PD3
(G.C.B) PD4
(C.C.A) PD5
(C.C.B) PD6
(D.MUTE) PD7
(DOLBY) PC0/PP010
PC1/PP011
PC2/PP012
PC3/RT03
(DOWN) PC4/RT04
(UP) PC5/RT05
(LED) PC6/RT06
(MR) PC7/RT07
(ST3) PB0/PP008
(ST2) PB1/PP009
(ST1) PB2/PP010
(DT) PB3/PP011
(CK) PB4/PP012
(C1) PB5/PP013
(V.ON1) PB6/PP014
(C2) PB7/PP015
(V.ON2) PA0/PP000
(EX.CK) PA1/PP001
PF6/SI1 (RQ.IN)
PF5/SO1 (S.IN)
PF4/SCK1
PF3/AN7
PF2/AN6
PF1/AN5
PF0/AN4
AN3
AN2
AN1
AN0 (VOL.DC)
AVss
AVref
AVdd
PG7/EX11
PG6/EX10
PG5
PG4
PG3
PG2
PG1
PG0
PE7/DAB1 (SP-REAR)
PE6/DAB0 (SP-A)
PD1 PD0 PH3 PH2 PH1 PH0 MP (RST) Vss XTAL EXTAL (CS0) SI0 SO0 (SCK0) PF7/(INT1)/(CS1)
(SC) (SO) (DRDY) (D.RESET) (D.RQ) (RESET) (U.SET) (DSP.DT) (DSP.CK) (AK)
ST REAR F.C.SW ACRY AC WAVE
(EX.DATA) PA2/PP002 (EX.ST) PA3/PP003 (MUTE2) PA4/PP004 (MUTE1) PA5/PP005 (SR.OUT) PA6/PP006 (ST.BY) PA7/PP007 Vss Vdd PE0/(INT0) PE1/(FC)/(INT2) PE2/PWM PE3/PWM (SP-MR) PE4/DAA (SP-C) PE5/DAA (SP-B)
1 24 25 40 41 64 65 80
+5V
GND
IC1853: SERIAL TO PARALLEL CONVERTER
IC1853
CXD1067P
EX.CK EX.DT EX.ST
VR.DC
UP
DOWN
LED
AMP.OVER.LOAD
AMP.DC.DET
MUTE.AC
MR
ST3
ST2
ST1
DATA
CK
C1
V.ON1
C2
V.ON2
SPLIT
VCR1.MUTE
VCR2.MUTE
REC SEL
ENH
MR.VIDEO
S OFF2
A1
B1
S OFF1
B2
A2
PWM
MUTE2
MUTE1
(➡ P73, P74)
OVER.LOAD
T.MUTE
CS
CK
DT
TUNED
STEREO
M-FL
M-FR
M-C
M-RL
M-RR
(➡ P73, P74)
A B C D E F

Pins No.				
1853 (CXD1067P)				
	3	4	5	6
–	–	–	–	–
–	–	–	–	–
1		H	–	–
2		L	–	–
–	–	–	H	–
–	–	–	L	–
–	–	–	–	L
–	–	–	–	H

of the SUB INPUT nchronizes with that

f the MAIN INPUT nchronizes with that

R.

4. PCB's PARTS LIST

NOTES:

- *Parts without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω 56 × 10^1 561........................RD1/4PS 5 6 1 J
47kΩ 47 × 10^3 473........................RD1/4PS 4 7 3 J
0.5Ω 0R5..RN2H 0 R 5 K
1Ω 010..RS1P 0 1 0 K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ 562 × 10^1 5621........................RN1/4SR 5 6 2 1 F

◉ TUNER assembly (AWE1160)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC431	AM/FM IC	LA1265S
	IC451	MPX IC	AN7470P
	IC471	PLL IC	LM7001
	Q401	MOS−FET	2SK241
	Q402	TRANSISTOR	2SC2786
	Q403	TRANSISTOR	2SC2668
	Q405	N−FET	2SK161
	Q421	TRANSISTOR	2SC2668
	Q451	TRANSISTOR	2SC2603
	Q452, 453	TRANSISTOR	2SC1740S
	Q454	TRANSISTOR	2SA933S
	Q471	N−FET	2SK246
	Q472	TRANSISTOR	2SC1740SLN
	Q473, 474	TRANSISTOR	RN2201
	D401−403	VARI−CAP DIODE	1SV147
	D431−435	DIODE	1SS252

COILS & TRANSFORMERS

Mark	No.	Description	Parts No.
	F421	CERAMIC FILTER	ATF−107
	F422	CERAMIC FILTER	ATF−119
	F431	CERAMIC FILTER	ATF1042
	F461	FILTER	ATF−164
	L401	COIL	ATC1001
	L402	COIL	ATC1002
	L403	COIL	ATC1004
	L404	COIL	ATC1005
	L405	COIL	ATC1003
	L406, 407	AXIAL INDUCTOR	LAU2R2M
	T402	IF TRANSFORMER	ATE−063
	T431	IF TRANSFORMER	ATE1001
	T432	IF TRANSFORMER	ATE1002

CAPACITORS

Mark	No.	Description	Parts No.
	C401	CERAMIC CAPACITOR	CCDRH330J50
	C402	CERAMIC CAPACITOR	CCDRH390J50
	C403	CERAMIC CAPACITOR (0.01μF)	ACG1021
	C404, 405	CERAMIC CAPACITOR	CCDRH330J50
	C406	CERAMIC CAPACITOR	CCDCH020C50
	C409	CERAMIC CAPACITOR (100p)	ACG1017
	C410−412	CERAMIC CAPACITOR (0.01μF)	ACG1021
	C413	CERAMIC CAPACITOR	CCDCH150J50
	C414	CERAMIC CAPACITOR	CCDCH330J50
	C415	CERAMIC CAPACITOR	CCDCH080D50
	C416	CERAMIC CAPACITOR	CCDTH180J50
	C417	CERAMIC CAPACITOR	CCDCH010C50
	C418, 419	CERAMIC CAPACITOR (0.01μF)	ACG1021
	C420	ELECTR.CAPACITOR	CEAS100M50
	C421, 422	CERAMIC CAPACITOR (0.01μF)	ACG1021
	C433	ELECTR.CAPACITOR	CEAS4R7M50
	C435	CERAMIC CAPACITOR	CKCYF472Z50
	C436	CERAMIC CAPACITOR	CKCYX683M25
	C437	ELECTR.CAPACITOR	CEAS100M50
	C438	ELECTR.CAPACITOR	CEAS2R2M50
	C439, 440	CERAMIC CAPACITOR	CKCYF223Z50
	C441	CERAMIC CAPACITOR (0.022μF)	ACG1022
	C442	ELECTR.CAPACITOR	CEAS0R1M50
	C443	ELECTR.CAPACITOR	CEAS3R3M50
	C444	CERAMIC CAPACITOR (330p)	ACG1018
	C445	CERAMIC CAPACITOR (47p)	ACG1016

Mark No.	Description	Parts No.
C446, 447	MYLOR FILM CAPACITOR	CQMA561J50
C451	ELECTR.CAPACITOR	CEAS101M16
C452	ELECTR.CAPACITOR	CEANP4R7M35
C453	CERAMIC CAPACITOR	CKCYF473Z50
C454	CAPACITOR (470p)	ACE1039
C455	ELECTR.CAPACITOR	CEAS3R3M50
C456	ELECTROLYTIC CAPACIT	CEAS1R5M50
C457	ELECTR.CAPACITOR	CEASR22M50
C458	ELECTR.CAPACITOR	CEAS470M16
C459, 460	MYLOR FILM CAPACITOR	CQMA102J50
C461, 462	ELECTR.CAPACITOR	CEAS4R7M50
C463, 464	ELECTR.CAPACITOR	CEAS470M16
C465	CERAMIC CAPACITOR (0.01μF)	ACG1021
C466	CERAMIC CAPACITOR	CCCSL121J50
C471	CERAMIC CAPACITOR (0.01μF)	ACG1021
C472	CERAMIC CAPACITOR (0.022μF)	ACG1022
C473	CERAMIC CAPACITOR (0.01μF)	ACG1021
C475	ELECTR.CAPACITOR	CEAS100M50
C476	CERAMIC CAPACITOR (0.01μF)	ACG1021
C477	CERAMIC CAPACITOR	CKCYF103Z50
C478	AUDIO FILM CAPACITOR	CFTXA224J50
C479	CERAMIC CAPACITOR (22p)	ACG1025
C480	CERAMIC CAPACITOR (0.01μF)	ACG1021
C481, 482	CERAMIC CAPACITOR	CCDCH150J50
C483	CERAMIC CAPACITOR (100p)	ACG1017
C484	ELECTR.CAPACITOR	CEAS470M16
C485	CERAMIC CAPACITOR (0.01μF)	ACG1021

RESISTORS

Mark No.	Description	Parts No.
VR431	VR (10K)	ACP1025
VR432	VR	VRTS6VS153
VR451	VR (4.7K)	ACP1024
	Other resistors	RD1/8PM□□□J

OTHERS

Mark No.	Description	Parts No.
	ANTENNA TERMINAL 4−P	AKA1014
	AM RF TUNING BLOCK	AXX1011
X431	CERAMIC RESONATOR	ATF1027
X471	CRYSTAL RESONATOR	ASS1005

◉ PS. μ−COM assembly (AWZ3571)

SEMICONDUCTORS

Mark No.	Description	Parts No.
IC104	REGULATOR IC	NJM78M12FAS
IC105	REGULATOR IC	NJM78M05FD
IC107	REGULATOR IC	NJM78M56FAS
IC108	REGULATOR IC	NJM79M05FA
IC1801−1803	OP−AMP IC	NJM4558S−X
IC1851	CONTROL MCU	PDG073A
IC1852	REGULATOR IC	M5278L56 (A)
• IC1853	PORT−EXPANDER IC	CXD1067P
IC51	OP−AMP−IC	M5220P
IC801	LOGIC IC	BU4066BL
IC802	E−VR IC	TC9176P
IC803, 804	OP−AMP IC	M5220L
Q101	TRANSISTOR	XDC143ES
Q102	TRANSISTOR	XDA143ES
Q103	TRANSISTOR	XDC143ES
Q1301, 1302	TRANSISTOR	2SC2458
Q1303	TRANSISTOR	2SA1048
Q1304−1306	TRANSISTOR	2SC2458
Q1307	TRANSISTOR	2SC3377
Q1308−1312	TRANSISTOR	XDC143ES
Q1331−1335	TRANSISTOR	XDA143ES
Q1337	TRANSISTOR	2SA1048
Q1351, 1352	TRANSISTOR	2SC3298
Q1353, 1354	TRANSISTOR	2SA1306
Q1851	TRANSISTOR	XDC124ES
Q1863, 1864	TRANSISTOR	2SA1048
Q1865	TRANSISTOR	2SC2458
Q71−73	TRANSISTOR	2SC2458
Q801	TRANSISTOR	XDA124ES
Q802	TRANSISTOR	XDC124ES
Q803−808	TRANSISTOR	2SC3327
Q811, 812	TRANSISTOR	XDA124ES
D101	DIODE	D5SB20
D107−110	DIODE	1SR139−400
D115	DIODE	1SS252
D116	ZENER DIODE	RD4.7ESB
D117	DIODE	1SS252
D119	ZENER DIODE	RD7.5ESB
D1301−1305	DIODE	1SS252
D131, 1311	DIODE	1SS252
D1312	ZENER DIODE	RD4.7ESB
D1313, 1314	DIODE	1SS252
D1315, 1316	DIODE	1SR139−400
D132, 133	DIODE	1SR139−400
D134	DIODE	1SS252
D1801−1810	DIODE	1SS252
D1811−1815	ZENER DIODE	RD5.6ESB3

Mark	No.	Description	Parts No.
	D1850	DIODE	1SS252
	D1856–1858	DIODE	1SS252
	D1861–1863	DIODE	1SS252
	D1864	ZENER DIODE	RD5.1ESB2
	D1871	DIODE	1SR139–400
	D71, 72	DIODE	1SS252
	D801	ZENER DIODE	RD5.1ESB
	D802	ZENER DIODE	RD5.1ESB1
	D804, 805	DIODE	1SS252
	D807–809	DIODE	1SS252

RELAIES

Mark	No.	Description	Parts No.
	RY102	RELAY	ASR–512
	RY1301, 1302	RELAY	ASR–112
	RY1303, 1304	RELAY	ASR1035
	RY1305	RELAY	ASR1005
	RY1306	RELAY	ASR1035

COILS & TRANSFORMER

Mark	No.	Description	Parts No.
	L1301, 1302	COIL	ATH1004
	L1303, 1304	COIL	ATH1011
	L1305	COIL	ATH1004
	L1871	AXIAL INDUCTOR	LAU100K
	T101	POWER TRANSFORMER	ATT1121

CAPACITORS

Mark	No.	Description	Parts No.
	C101	CAPACITOR (8200/81)	ACH1201
	C102	CAPACITOR (8200/81)	ACH1202
	C108, 109	CKA (0.01/AC400V)	ACG1003
	C110	ELECTR.CAPACITOR	CEAS222M16
	C111	ELECTR.CAPACITOR	CEAS471M16
	C112	ELECTR.CAPACITOR	CEAS102M16
	C113, 114	CERAMIC CAPACITOR	CKCYF473Z50
	C115, 116	ELECTR.CAPACITOR	CEAS101M10
	C117	CERAMIC CAPACITOR	CKCYF473Z50
	C118	ELECTR.CAPACITOR	CEAS101M10
	C124	CERAMIC CAPACITOR	CKCYF103Z50
	C126	ELECTR.CAPACITOR	CEAS470M16
	C127	CKA (0.01/AC250V)	ACG1005
	C128, 129	ELECTR.CAPACITOR	CEAS470M16
	C1301	ELECTROLYTIC CAPACIT	CEAS471M6
	C1302	CERAMIC CAPACITOR	CKCYF103Z50
	C1303	CERAMIC CAPACITOR	CKCYF473Z50
	C1304	ELECTR.CAPACITOR	CEAS221M10
	C1305	ELECTR.CAPACITOR	CEAS010M50
	C1309	AUDIO FILM CAPACITOR	CFTXA104J50
	C131	ELECTR.CAPACITOR	CEAS471M10
	C1310–1312	AUDIO FILM CAPACITOR	CFTXA104J50
	C1351–1354	CERAMIC CAPACITOR	CCDSL101K500
	C1355, 1356	AUDIO FILM CAPACITOR	CFTXA104J50
	C1358	AUDIO FILM CAPACITOR	CFTXA104J50
	C1360, 1361	POLYESTER CAPACITOR	CQMXA103J100
	C1801–1805	ELECTR.CAPACITOR	CEASR47M50
	C1851	ELECTR.CAPACITOR	CEAS0R1M50
	C1852	ELECTR.CAPACITOR	CEAS4R7M50
	C1856, 1857	CERAMIC CAPACITOR	CKCYF103Z50
	C1871	ELECTR.CAPACITOR	CEAS101M10
	C1872	CEA (47000/5.5V)	ACH1037
	C1873	ELECTR.CAPACITOR	CEAS4R7M50
	C1899	ELECTR.CAPACITOR	CEAS470M16
	C51, 52	ELECTR.CAPACITOR	CEAS100M25
	C53, 54	CERAMIC CAPACITOR	CKCYB331K50
	C55, 56	ELECTROLYTIC CAPACIT	CEAS471M6
	C57, 58	AUDIO FILM CAPACITOR	CFTXA243J50
	C59, 60	AUDIO FILM CAPACITOR	CFTXA823J50
	C61, 62	ELECTR.CAPACITOR	CEAS2R2M50
	C63, 64	ELECTR.CAPACITOR	CEAS101M16
	C71, 72	ELECTR.CAPACITOR	CEAS2R2M50
	C73	ELECTR.CAPACITOR	CEAS101M10
	C801, 802	ELECTR.CAPACITOR	CEAS4R7M50
	C805, 806	CERAMIC CAPACITOR	CCCSL470J50
	C807–810	ELECTR.CAPACITOR	CEAS4R7M50
	C811, 812	CERAMIC CAPACITOR	CKCYB331K50
	C813, 814	ELECTR.CAPACITOR	CEAS4R7M50
	C815, 816	ELECTR.CAPACITOR	CEAS470M16
	C817–820	ELECTR.CAPACITOR	CEAS4R7M50

RESISTORS

Mark	No.	Description	Parts No.
	VR51	VR	ACS1060
	R101, 105	CARBON FILM RESISTOR	RD1/4PMF4R7J
	R107, 110	CARBON FILM RESISTOR	RD1/4PMF100J
	R111	CARBON FILM RESISTOR	RD1/4PMF122J
	R112	METAL OXIDE RESISTOR	RS2LMF2R2J
	R113	METAL OXIDE RESISTOR	RS2LMF100J
	R115	CARBON FILM RESISTOR	RD1/4PMF100J
	R116, 117	METAL OXIDE RESISTOR	RS2LMF150J
	R118	FUSIBLE RESISTOR	RFA1/4PS4R7J
	R1351–1354	CARBON FILM RESISTOR	RD1/4PMF101J
	R1355–1358	CARBON FILM RESISTOR	RD1/4PMF470J
	R1359, 1360	FUSIBLE RESISTOR	RFA1/4PS4R7J
	R1361–1364	CARBON FILM RESISTOR	RD1/4PMF4R7J
	R1365, 1366	FUSIBLE RESISTOR	RFA1/4PS4R7J
	R1367, 1368	RESISTOR (0.33, 5W)	ACN1087

Mark	No.	Description	Parts No.
	R1369,. 1370	METAL OXIDE RESISTOR	RS2LMF331J
	R1371−1374	METAL OXIDE RESISTOR	RS1LMF100J
	R1375−1380	CARBON FILM RESISTOR	RD1/4PMF100J
	R1865	CARBON FILM RESISTOR	RD1/4PM222J
	R819, 820	CARBON FILM RESISTOR	RD1/4PMF102J
	R999	RESISTOR (2.2M, 1/2W)	ACN−209
		Other resistors	RD1/8PM□□□J
OTHERS			
		TERMINAL 4P	AKB1141
		SPEAKER TERMINAL 8P	AKE1011
		JACK (CONTROL)	AKN1006
		JACK (REMOTE)	AKN1020
		AC OUTLET (3P)	AKP1053
	CN13	CONNECTOR (4P)	KPC4
	CN16	CONNECTOR (7P)	KPC7
	CN26	CONNECTOR (4P)	KPC4
	CN27	JUMPER CONNECTOR	KPC6
	CN28	CONNECTOR (15P)	KPE15
	CN29	CONNECTOR (14P)	KPE14
	CN31	CONNECTOR (3P)	KPE3
	CN32, 33	CONNECTOR (9P)	KPE9
	CN34	CONNECTOR (13P)	KPE13
	CN59	CONNECTOR (11P)	KPE11
	CN60	CONNECTOR (9P)	KPE9
	CN61	CONNECTOR (10P)	KPE10
	X1851	CRYSTAL RESONATOR	ASS1015
		FRONT AMP ASSEMBLY	AWH1014

◉ FRONT AMP assembly (AWH1014)

The FRONT AMP assembly (AWH1014) is a part of PS. μ−COM assembly (AWZ3571).

SEMICONDUCTORS

	IC601, 602	AUDIO IC	PA0045
	Q603, 604	TRANSISTOR	2SC2240
	Q605, 606	TRANSISTOR	2SA970
	Q607, 608	TRANSISTOR	2SA1145
	Q609, 610	TRANSISTOR	2SC2705
	Q621−624	TRANSISTOR	2SA992
	Q661, 662	TRANSISTOR	2SC2240
	D601−612	DIODE	1SS252
	D661−666	DIODE	1SS252
	D670−673	ZENER DIODE	RD12ESB

Mark	No.	Description	Parts No.
CAPACITORS			
	C601, 602	CERAMIC CAPACITOR	CCCSL221J50
	C603, 604	ELECTR.CAPACITOR	CEAS2R2M50
	C605, 606	CERAMIC CAPACITOR	CKCYB331K50
	C607, 608	ELECTROLYTIC CAPACIT	CEXA471M16
	C609, 610	MICA CAPACITOR	CMA150J500
	C611, 612	CERAMIC CAPACITOR	CCCSL020C500
	C613, 614	CERAMIC CAPACITOR	CCCSL680J50
	C615, 616	CERAMIC CAPACITOR	CCCSL151J50
	C617, 618	CERAMIC CAPACITOR	CCCSL680J50
	C625−628	CERAMIC CAPACITOR (0.047/150)	ACG−009
	C661, 662	ELECTROLYTIC CAPACIT	CEANP010M100
RESISTORS			
	R601−604	CARBON FILM RESISTOR	RD1/4PM□□□J
	R605, 606	CARBON FILM RESISTOR	RDR1/4PM223J
	R607−612	CARBON FILM RESISTOR	RD1/4PM□□□J
	R613−616	FUSIBLE RESISTOR	RFA1/4PS101J
	R617, 618	CARBON FILM RESISTOR	RDR1/4PM751J
	R619, 620	CARBON FILM RESISTOR	RDR1/2PM223J
	R621, 622	FUSIBLE RESISTOR	RFA1/4PS121J
	R623, 624	CARBON FILM RESISTOR	RD1/4PM104J
	R625, 625	FUSIBLE RESISTOR	RFA1/4PS470J
	R637−640	CARBON FILM RESISTOR	RD1/4PMF470J
	R661−664	CARBON FILM RESISTOR	RD1/4PMF222J
		Other resistors	RD1/8PM□□□J

◉ R.C.REG. POWER SUPPLY assembly (AWZ3572)

SEMICONDUCTORS

	D102	DIODE	4D4B44
	D111−114	DIODE	1SR139−400

CAPACITORS

	C104, 105	ELECTROLYTIC CAPACIT (6800/42)	ACH1110
	C106	ELECTR.CAPACITOR	CEAS332M25
	C107	ELECTROLYTIC CAPACIT	CEAS102M35

◉ TRANS assembly (AWZ3573)

RESISTORS

Mark	No.	Description	Parts No.
	R122, 123	CARBON FILM RESISTOR	RD1/4PMF010J

FRONT VIDEO assembly

CAPACITORS

Mark	No.	Description	Parts No.
	C1991, 1992	CERAMIC CAPACITOR	CKCYX473M25

RESISTORS

Mark	No.	Description	Parts No.
		All resistors	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Parts No.
		PIN JACK 1P (VCR 3)	AKB1082
		SOCKET (S VIDEO)	AKP1067

◉ R.C.SPEAKER assembly (AWZ3566)

OTHERS

Mark	No.	Description	Parts No.
		SPEAKER TERMINAL 2−P	AKE−058
		SPEAKER TERMINAL 4−P	AKE1007
	CN20	CONNECTOR (9P)	KPC9

◉ MOTOR VOLUME assembly (AWZ3567)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC501	OP−AMP IC	M5220L
	IC502	E−VR IC	TC9154AP
	IC503	OP−AMP IC	M5220L
	IC505	MECHANISM DRIVER IC	TA7291S
	Q501	TRANSISTOR	XDC124ES
	D502	DIODE	1SS252
	D503, 504	ZENER DIODE	RD4.7ESB
	D551, 552	ZENER DIODE	RD5.1ESB

COILS

Mark	No.	Description	Parts No.
	L541, 542	AXIAL INDUCTOR	LAU560K

CAPACITORS

Mark	No.	Description	Parts No.
	C501, 502	ELECTR.CAPACITOR	CEAS100M50
	C503, 504	CERAMIC CAPACITOR	CCCSL560J50
	C507, 508	ELECTR.CAPACITOR	CEAS4R7M50
	C510	CERAMIC CAPACITOR	CCCSL560J50
	C511, 512	ELECTR.CAPACITOR	CEAS4R7M50
	C513	CERAMIC CAPACITOR	CCCSL221J50
	C541	ELECTR.CAPACITOR	CEAS100M50
	C542, 543	CERAMIC CAPACITOR	CKCYF473Z50
	C544	ELECTR.CAPACITOR	CEAS221M16
	C551, 552	ELECTR.CAPACITOR	CEAS470M16
	C560	ELECTR.CAPACITOR	CEAS010M50

RESISTORS

Mark	No.	Description	Parts No.
	VR501	VR	ACX1056
	R552, 559	CARBON FILM RESISTOR	RD1/4PM821J
		Other resistors	RD1/8PM□□□J

◉ FRONT CONTROL assembly (AWZ3569)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC1901	SYSTEM CONTROL MCU	PDG072A
	Q1901−1918	TRANSISTOR	XDC143ES
	Q1919	TRANSISTOR	XDC124ES
	Q1920	TRANSISTOR	XDC143ES
	Q1931, 1932	TRANSISTOR	2SC2458
	D1901−1911	DIODE	1SS252
	D1912, 1913	LED	AEL1113
	D1914−1918	LED	AEL1100
	D1919	LED (RED)	AEL1108
	D1921−1924	DIODE	1SS252
	D1931	DIODE	1SS252

SWITCHES

Mark	No.	Description	Parts No.
	S1901−1966	SWITCH	ASG1034
	S1970	ROTARY ENCODER	ASX1008

COIL

Mark	No.	Description	Parts No.
	L1901	AXIAL INDUCTOR	LAU100K

CAPACITORS

Mark	No.	Description	Parts No.
	C1901	ELECTR.CAPACITOR	CEJA220M10
	C1902	AXIAL CERAMIC CAPACITOR	CKPUYF103Z25
	C1903	ELECTR.CAPACITOR	CEAS010M50

RESISTORS

Mark	No.	Description	Parts No.
	R1920−1926	CARBON FILM RESISTOR	RD1/4PM151J
	R1927	CARBON FILM RESISTOR	RD1/4PM271J
		Other resistors	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Parts No.
		FL SPACER	AEB1120
		REMOTE RECEIVER UNIT	AXX1010

Mark	No.	Description	Parts No.
	CN1901	CONNECTOR (4P)	KPC4
	V1901	FL TUBE	AAV1123
	X1901	CERAMIC OSCILLATOR	ASS1022

● DSP assembly (AWZ3570)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC1101	OP−AMP IC	RC4558DXP
	IC1102	OP AMP	M5238PF
	IC1103	A/D CONVERTER	LC7886
	IC1104	DSP IC	LC83010NPD
	IC1105, 1106	MEMORY IC	MS51464−12Z
	IC1107−1109	IC DIGITAL FILTER	PD0060
	IC1110	D/A CONVERTER	LC78820−B
	IC1111	IC	NJM072D−E
	IC1112	OP−AMP IC	RC4558DXP
	IC1113	IC	PCM56P
	IC1114	IC	RC4558DXP
	IC1115	D/A CONVERTER	UPD6376CX
	IC1116	IC	RC4558DXP
	IC1117	OP−AMP IC	RC4558DXP
	IC1118	LOGIC IC	TC4052BP
	IC1119	OP−AMP IC	RC4558DXP
	IC1120	LOGIC IC	TC4066BP
	IC1121, 1122	OP−AMP IC	RC4558DXP
	IC1123	LOGIC IC	TC4066BP
	IC1124	DOLBY−B IC	LA2730
	IC1125	OP−AMP IC	RC4558DXP
	Q1131	TRANSISTOR	2SC2458
	Q1181	TRANSISTOR	XDA124ES
	Q1182	TRANSISTOR	2SA1048
	Q1183	TRANSISTOR	XDC124ES
	Q1184	TRANSISTOR	2SA1048
	Q1185	TRANSISTOR	2SC3327
	Q1186	TRANSISTOR	XDA124ES
	Q1201	TRANSISTOR	XDC143ES
	Q1202, 1203	N−FET	2SK373
	Q1251	TRANSISTOR	XDA124ES
	Q1252	TRANSISTOR	XDC124ES
	Q1253, 1254	TRANSISTOR	2SC3327
	D1101−1105	DIODE	1SS252
	D1111−1114	DIODE	1SS252
	D1201, 1202	DIODE	1SS252

COILS

Mark	No.	Description	Parts No.
	F1101, 1102	FILTER	ATF1071
	F1103, 1104	FILTER	ATF1106
	F1105	FILTER	ATF1102
	F1106	FILTER	ATF1106
	L1103, 1104	FERRITE BEAD	ATX1008
	L1131	FERRITE BEAD	ATX1008
	L1151, 1152	AXIAL INDUCTOR	LAU330K
	L1161	AXIAL INDUCTOR	LAU330K
	L1162	FERRITE BEAD	ATX1008
	L1181−1185	FERRITE BEAD	ATX1008
	L1241, 1242	FERRITE BEAD	ATX1008
	L1251, 1252	FERRITE BEAD	ATX1008
	L1186	FERRITE BEAD	ATX1008

CAPACITORS

Mark	No.	Description	Parts No.
	C1101, 1102	CERAMIC CAPACITOR	CKDYX473M25
	C1103, 1104	ELECTR.CAPACITOR	CEAS470M16
	C1105, 1106	CERAMIC CAPACITOR	CKDYB102K50
	C1107, 1108	ELECTR.CAPACITOR	CEAS100M25
	C1109, 1110	MYLOR FILM CAPACITOR	CQMA153J50
	C1113, 1114	CERAMIC CAPACITOR	CKDYB222K50
	C1115	CERAMIC CAPACITOR	CKDYX104M25
	C1116	ELECTR.CAPACITOR	CEAS470M10
	C1117	CERAMIC CAPACITOR	CKDYB471K50
	C1118	ELECTR.CAPACITOR	CEAS470M10
	C1119	CERAMIC CAPACITOR	CKDYX104M25
	C1120−1122	CERAMIC CAPACITOR	CKDYX473M25
	C1123	ELECTR.CAPACITOR	CEAS101M10
	C1131	CERAMIC CAPACITOR	CKDYX473M25
	C1132	ELECTR.CAPACITOR	CEAS470M10
	C1133	ELECTR.CAPACITOR	CEAS221M10
	C1134	ELECTR.CAPACITOR	CEAS101M16
	C1137, 1138	ELECTR.CAPACITOR	CEAS220M25
	C1139, 1140	MYLOR FILM CAPACITOR	CQMA821J50
	C1141, 1142	MYLOR FILM CAPACITOR	CQMA222J50
	C1143, 1144	CERAMIC CAPACITOR	CCDCH121J50
	C1145, 1146	MYLOR FILM CAPACITOR	CQMA223J50
	C1150−1153	CERAMIC CAPACITOR	CKDYX473M25
	C1154, 1155	ELECTR.CAPACITOR	CEAS101M10
	C1156	MYLOR FILM CAPACITOR	CQMA223J50
	C1157	MYLOR FILM CAPACITOR	CQMA821J50
	C1158	MYLOR FILM CAPACITOR	CQMA222J50
	C1159	CERAMIC CAPACITOR	CCDCH121J50
	C1160	ELECTR.CAPACITOR	CEAS220M25
	C1161	CERAMIC CAPACITOR	CKDYX473M25
	C1162−1165	ELECTR.CAPACITOR	CEAS470M10
	C1166	CERAMIC CAPACITOR	CKDYX473M25
	C1167	CERAMIC CAPACITOR	CKDYB471K50
	C1169, 1170	MYLOR FILM CAPACITOR	CQMA821J50
	C1171, 1172	CERAMIC CAPACITOR	CCDCH121J50
	C1173, 1174	MYLOR FILM CAPACITOR	CQMA222J50

Mark	No.	Description	Parts No.
	C1175, 1176	ELECTR.CAPACITOR	CEAS220M25
	C1177, 1178	MYLOR FILM CAPACITOR	CQMA223J50
	C1181, 1182	CERAMIC CAPACITOR	CCDCH101J50
	C1183−1186	ELECTR.CAPACITOR	CEAS220M25
	C1187, 1188	MYLOR FILM CAPACITOR	CQMA152K50
	C1189, 1190	CERAMIC CAPACITOR	CCDCH101J50
	C1194	AUDIO FILM CAPACITOR	CFTXA274J50
	C1195	ELECTR.CAPACITOR	CEAS220M25
	C1196	CERAMIC CAPACITOR	CCDCH101J50
	C1197	ELECTR.CAPACITOR	CEAS220M25
	C1198	MYLOR FILM CAPACITOR	CQMA152K50
	C1199	ELECTR.CAPACITOR	CEANP2R2M50
	C1201, 1202	ELECTR.CAPACITOR	CEAS470M10
	C1203, 1204	CERAMIC CAPACITOR	CCDCH560J50
	C1211	CERAMIC CAPACITOR	CKDYX473M25
	C1212	CERAMIC CAPACITOR	CKDYB102K50
	C1214	CERAMIC CAPACITOR	CKDYX473M25
	C1234, 1235	CERAMIC CAPACITOR	CKDYB102K50
	C1236−1239	CERAMIC CAPACITOR	CCDCH101J50
	C1240	ELECTR.CAPACITOR	CEAS101M10
	C1241	CERAMIC CAPACITOR	CKDYX473M25
	C1242	CERAMIC CAPACITOR	CKDYB102K50
	C1243, 1244	CERAMIC CAPACITOR	CCDCH100D50
	C1245	CERAMIC CAPACITOR	CKDYX473M25
	C1246	CERAMIC CAPACITOR	CKDYB102K50
	C1247	ELECTR.CAPACITOR	CEAS101M10
	C1248	CERAMIC CAPACITOR	CKDYX104M25
	C1249	CERAMIC CAPACITOR	CCDCH101J50
	C1251	MYLOR FILM CAPACITOR	CQMA472J50
	C1252	MYLOR FILM CAPACITOR	CQMA122J50
	C1254	ELECTR.CAPACITOR	CEAS220M16
	C1255	ELECTR.CAPACITOR	CEAS470M25
	C1256	ELECTR.CAPACITOR	CEAS100M25
	C1257	MYLOR FILM CAPACITOR	CQMA333K50
	C1258	MYLOR FILM CAPACITOR	CQMA472K50
	C1259	ELECTR.CAPACITOR	CEAS220M16
	C1260	ELECTR.CAPACITOR	CEAS101M16
	C1261	MYLOR FILM CAPACITOR	CQMA333K50
	C1262	AUDIO FILM CAPACITOR	CFTXA104J50
	C1267	ELECTR.CAPACITOR	CEAS010M50
	C1263	ELECTR.CAPACITOR	CEASR33M50
	C1264	CERAMIC CAPACITOR	CKDYB471K50
	C1265, 1266	ELECTR.CAPACITOR	CEAS010M50
	C1269, 1270	ELECTR.CAPACITOR	CEAS220M25
	C1271, 1272	MYLOR FILM CAPACITOR	CQMA152K50

Mark	No.	Description	Parts No.
	RESISTORS		
	VR1101, 1102	VR	VRTB6VS102
	VR1103	VR	VRTB6VS104
	VR1201	VR	VRTB6VS223
		Other resistors	RD1/8PM□□□J
	OTHERS		
	X1101	CRYSTAL RESONATOR	ASS1035

HEADPHONE assembly

OTHERS

Mark	No.	Description	Parts No.
		JACK (HEADPHONE)	AKN1002

● S. VIDEO assembly (AWZ3564)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC1650	VIDEO SEITCH	LA7952
	IC1651	E−SW IC	NJM2233BS
	IC1652	VIDEO SEITCH	LA7952
	IC1653	E−SW IC	NJM2233BS
	IC1654, 1655	VIDEO SEITCH	LA7952
	IC1656, 1657	E−SW IC	NJM2234L
	IC1658	LOGIC IC	BU4066BL
	Q1650−1656	TRANSISTOR	2SC2458
	Q1657, 1658	TRANSISTOR	XDA124ES
	Q1659	TRANSISTOR	2SC2458
	Q1662−1664	TRANSISTOR	2SA1048
	D1650−1653	DIODE	1SS252
	D1655	ZENER DIODE	RD5.1ESB1

CAPACITORS

Mark	No.	Description	Parts No.
	C1650−1652	ELECTR.CAPACITOR	CEAS4R7M50
	C1653−1655	ELECTR.CAPACITOR	CEAS470M16
	C1657−1659	ELECTR.CAPACITOR	CEAS4R7M50
	C1660	ELECTR.CAPACITOR	CEAS101M10
	C1661−1666	CERAMIC CAPACITOR	CKCYX103M25
	C1667−1674	ELECTR.CAPACITOR	CEAS470M16
	C1675−1677	ELECTR.CAPACITOR	CEAS101M16
	C1678	ELECTR.CAPACITOR	CEAS470M16
	C1687	AXIAL CERAMIC C.	CCPUSL470J50
	C1688	ELECTR.CAPACITOR	CEAS4R7M50
	C1689	ELECTR.CAPACITOR	CEAS470M16
	C1690	CERAMIC CAPACITOR	CKCYF473Z50
	C1691	ELECTR.CAPACITOR	CEAS470M25
	C1692−1694	AXIAL CERAMIC C.	CCPUSL470J50
	C1695	ELECTR.CAPACITOR	CEAS101M10
	C1696	ELECTR.CAPACITOR	CEAS470M25
	C1697, 1698	CERAMIC CAPACITOR	CCCSL101J50
	C1699	CERAMIC CAPACITOR	CCCSL330J50

Mark No.	Description	Parts No.
RESISTORS		
	All resistors	RD1/8PM□□□J
OTHERS		
	SOCKET (S.TERM.)	AKP1065

◉ R.C.AMP assembly (AWZ3568)

Mark No.	Description	Parts No.
SEMICONDUCTORS		
IC901–903	PREDRIVER–IC	UPC1270H
Q901–903	TRANSISTOR	2SC2458
CAPACITORS		
C901, 902	ELECTR.CAPACITOR	CEAS2R2M50
C903, 904	CERAMIC CAPACITOR	CKMYB102K50
C905, 906	ELECTROLYTIC CAPACIT	CEHAQ101M10
C907, 908	CERAMIC CAPACITOR	CCMSL270J50
C909, 910	ELECTR.CAPACITOR	CEHAQ100M50
C911, 912	AUDIO FILM CAPACITOR	CFTXA333J50
C913, 914	ELECTROLYTIC CAPACIT	CEAS4R7M100
C915, 916	ELECTR.CAPACITOR	CEAS100M50
C917	ELECTROLYTIC CAPACIT	CEAS4R7M100
C919	ELECTR.CAPACITOR	CEAS2R2M50
C920	CERAMIC CAPACITOR	CKMYB102K50
C921	ELECTROLYTIC CAPACIT	CEHAQ101M10
C922	CERAMIC CAPACITOR	CCMSL270J50
C923	ELECTR.CAPACITOR	CEHAQ100M50
C924	AUDIO FILM CAPACITOR	CFTXA333J50
RESISTORS		
R919, 920	RESISTOR (0.22, 2W)	ACN–131
R929	RESISTOR (0.22, 2W)	ACN–131
R933–938	FUSIBLE RESISTOR	RFA1/4PS4R7J
	Other resistors	RD1/8PM□□□J

◉ REGULATOR 1 assembly (AWZ3574)

Mark No.	Description	Parts No.
SEMICONDUCTORS		
IC103	REGULATOR IC	NJM78M12FAS
Q106	TRANSISTOR	2SA1306
D118	DIODE	1SS252
CAPACITORS		
C123	CERAMIC CAPACITOR	CKCYF103Z50
C125	ELECTR.CAPACITOR	CEAS470M16

◉ REGULATOR 2 assembly (AWZ3575)

Mark No.	Description	Parts No.
SEMICONDUCTORS		
IC101	REGULATOR IC	NJM78M15FAS
IC102	REGULATOR IC	NJM79M15FA
CAPACITORS		
C119, 120	CERAMIC CAPACITOR	CKCYF103Z50
C121, 122	ELECTR.CAPACITOR	CEAS470M16

◉ OSD assembly (AWZ3634)

Mark No.	Description	Parts No.
SEMICONDUCTORS		
IC1501	TV IC	UPC1377C
IC1502	OSD IC	M50554–003SP
IC1503	REGULATOR IC	UPC78L05
Q1501, 1502	TRANSISTOR	2SC2458
Q1503, 1504	TRANSISTOR	2SA1048
Q1505	TRANSISTOR	XDA124ES
Q1506, 1507	TRANSISTOR	2SC2458
Q1508	TRANSISTOR	XDC124ES
Q1509	TRANSISTOR	XDA124ES
D1501	ZENER DIODE	RD5.1ESB1
D1503–1505	DIODE	1SS252
COILS		
L1501	AXIAL INDUCTOR	LAU390K
L1502	AXIAL INDUCTOR	LAU150K
L1503, 1504	AXIAL INDUCTOR	LAU270K
CAPACITORS		
TC1501	CERAMIC TRIMMER	ACM–020
C1501	ELECTR.CAPACITOR	CEAS101M16
C1502	CERAMIC CAPACITOR	CCCSL560J50
C1503	ELECTR.CAPACITOR	CEAS010M50
C1504	CERAMIC CAPACITOR	CKCYB561K50
C1505, 1506	MYLOR FILM CAPACITOR	CQMA333J50
C1507	ELECTR.CAPACITOR	CEAS010M50
C1508	AUDIO FILM CAPACITOR	CFTXA105J50
C1509	CERAMIC CAPACITOR	CKCYF473Z50
C1510	MYLOR FILM CAPACITOR	CQMA333J50
C1511	ELECTR.CAPACITOR	CEAS010M50
C1512	CERAMIC CAPACITOR	CKCYB152K50
C1513	AUDIO FILM CAPACITOR	CFTXA823J50
C1514	CERAMIC CAPACITOR	CKCYB472K50
C1515	PL.STYRENE CAPACITOR	CQSA562J50
C1516	ELECTR.CAPACITOR	CEAS2R2M50

Mark	No.	Description	Parts No.
	C1517	ELECTR.CAPACITOR	CEAS101M16
	C1518	CERAMIC CAPACITOR	CCCSL101J50
	C1519	AUDIO FILM CAPACITOR	CFTXA104J50
	C1520	ELECTR.CAPACITOR	CEAS2R2M50
	C1521	ELECTR.CAPACITOR	CEAS101M10
	C1522	CERAMIC CAPACITOR	CKCYF103Z50
	C1523	ELECTR.CAPACITOR	CEAS220M25
	C1524, 1525	CERAMIC CAPACITOR	CCCCH150J50
	C1526	CERAMIC CAPACITOR	CCCSL330J50
	C1527	ELECTR.CAPACITOR	CEAS470M16
	C1528	CERAMIC CAPACITOR	CCCSL220J50
	C1529	CERAMIC CAPACITOR	CKCYF103Z50
	C1530	CERAMIC CAPACITOR	CCCSL220J50
	C1531	CERAMIC CAPACITOR	CKCYF103Z50
	C1534	CERAMIC CAPACITOR	CCCSL220J50
	C751–754	CERAMIC CAPACITOR	CKCYB102K50
RESISTORS			
	VR1501	VR	VRTS6HS103
	VR1502	VR	VRTS6HS472
	R1515	CARBON FILM RESISTOR	RD1/4PMF100J
	R1518	METALFILM RESISTER	RN1/4PC1202F
	R1544	CARBON FILM RESISTOR	RD1/4PM4R7J
		Other resistors	RD1/8PM□□□J
OTHERS			
		PIN JACK 1P (SUB WOOFER)	AKB1139
		PIN JACK 2P (CENTER AMP)	AKB1142
	CN	PIN JACK 4P (REAR AMP)	AKB1181
	CN42	CONNECTOR 4P	KPC4
	X1505	CRYSTAL RESONATOR	ASS1056

◉ MAIN FUNCTION assembly (AWZ3673)

SEMICONDUCTORS

	IC201	E–SW IC	TC9164N
	IC202	E–SW IC	TC9163N
	IC203	OP AMP	M5238LF

CAPACITORS

	C201–208	CERAMIC CAPACITOR	CCCSL101J50
	C211, 212	ELECTR.CAPACITOR	CEAS100M50
	C213	ELECTR.CAPACITOR	CEAS010M50
	C214, 215	ELECTR.CAPACITOR	CEAS470M16
	C220, 221	CERAMIC CAPACITOR	CKCYB102K50
	C230	CERAMIC CAPACITOR	CKCYB102K50

Mark	No.	Description	Parts No.
RESISTORS			
		All resistors	RD1/8PM□□□J
OTHERS			
		PHONO JACK 6P	AKB1154
	CN	PIN JACK 8P (TAPE1/DAT, TAPE2)	AKB1182

◉ SUB FUNCTION assembly (AWZ3674)

SEMICONDUCTORS

	IC301	E–SW IC	TC9164N
	IC302	E–SW IC	TC9163N
	IC303	OP AMP	M5238LF

CAPACITORS

	C301–310	CERAMIC CAPACITOR	CCCSL101J50
	C315, 316	ELECTR.CAPACITOR	CEAS220M50
	C317	ELECTR.CAPACITOR	CEAS010M50
	C318, 319	ELECTR.CAPACITOR	CEAS470M16
	C320, 321	CERAMIC CAPACITOR	CKCYB102K50
	C330	CERAMIC CAPACITOR	CKCYB102K50

RESISTORS

		All resistors	RD1/8PM□□□J

OTHERS

	CN	6P PIN JACK (CD, CDV, TV, VIDEO)	AKB1178
	CN	8P PIN JACK (VCR1, 2)	AKB1179
	CN21, 22	CONNECTOR (15P)	KPE15
	CN23	CONNECTOR (11P)	KPE11
	CN24	CONNECTOR (7P)	KPE7

◉ VIDEO FUNCTION assembly (AWZ3675)

SEMICONDUCTORS

	IC1601–1606	E–SW IC	NJM2234L
	Q1601–1608	TRANSISTOR	2SC2458

COILS

	L1601, 1602	AXIAL INDUCTOR	LAUR22M

CAPACITORS

	C1601–1605	ELECTR.CAPACITOR	CEAS470M16
	C1606–1609	ELECTR.CAPACITOR	CEAS101M10
	C1610, 1611	ELECTR.CAPACITOR	CEAS470M16
	C1613	ELECTR.CAPACITOR	CEAS470M16
	C1614	CERAMIC CAPACITOR	CCCSL270J50

Mark	No.	Description	Parts No.
	C1615	ELECTR.CAPACITOR	CEAS470M16
	C1616	CERAMIC CAPACITOR	CCCSL270J50
	C1617 – 1619	ELECTR.CAPACITOR	CEAS470M16
	C1625 – 1627	ELECTR.CAPACITOR	CEAS470M16
	C1628, 1629	CERAMIC CAPACITOR	CKDYX473M25
	C1630	ELECTR.CAPACITOR	CEAS470M16
	C1632	CERAMIC CAPACITOR	CKDYX473M25

RESISTORS

Mark	No.	Description	Parts No.
		All resistors	RD1/8PM☐☐☐J

OTHERS

Mark	No.	Description	Parts No.
	CN	PIN JACK 3P (VIDEO IN)	AKB1170
	CN	PIN JACK 2P (VIDEO IN)	AKB1173

● ENHANCER assembly (AWZ3676)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC1701	E – SW IC	NJM2233BS
	IC1702	E – SW IC	NJM2234L
	IC1703	LOGIC IC	BU4066BL
	IC1704	E – SW IC	NJM2209S
	IC1705	E – SW IC	NJM2235S
	Q1701 – 1705	TRANSISTOR	2SC2458
	Q1706 – 1708	TRANSISTOR	XDA124ES
	Q1709	TRANSISTOR	2SA1048
	Q1710	TRANSISTOR	XDC124ES
	Q1711, 1712	TRANSISTOR	2SA1048
	Q1713	TRANSISTOR	2SC2458
	Q1714, 1715	TRANSISTOR	2SA1048
	Q1716	TRANSISTOR	2SC2458
	Q1717	TRANSISTOR	2SC3327
	Q1718, 1719	TRANSISTOR	2SC2458
	Q1720	TRANSISTOR	2SA1048
	Q1721 – 1726	TRANSISTOR	2SC2458
	Q1727	TRANSISTOR	2SA1048
	Q1728	TRANSISTOR	2SC3327
	D1701 – 1704	DIODE	1SS252
	D1707	ZENER DIODE	RD5.6ESB

COILS

Mark	No.	Description	Parts No.
	L1740	AXIAL INDUCTOR	LAU221K
	L1741	AXIAL INDUCTOR	LAU270K
	L1742	AXIAL INDUCTOR	LAU390K
	L1743, 1744	AXIAL INDUCTOR	LAU221K
	L1745	AXIAL INDUCTOR	LAU270K
	L1746	AXIAL INDUCTOR	LAU390K
	L1747, 1748	AXIAL INDUCTOR	LAU101K

CAPACITORS

Mark	No.	Description	Parts No.
	C1701 – 1703	ELECTR.CAPACITOR	CEAS2R2M50
	C1704 – 1707	ELECTR.CAPACITOR	CEAS470M16
	C1708	AUDIO FILM CAPACITOR	CFTXA823J50
	C1709	AUDIO FILM CAPACITOR	CFTXA393J50
	C1711	AUDIO FILM CAPACITOR	CFTXA104J50
	C1712	CERAMIC CAPACITOR	CCCCH070D50
	C1713	CERAMIC CAPACITOR	CCCCH030C50
	C1714, 1715	CERAMIC CAPACITOR	CCCCH680J50
	C1716	CERAMIC CAPACITOR	CCCSL100D50
	C1717, 1718	CERAMIC CAPACITOR	CCCCH470J50
	C1719	ELECTR.CAPACITOR	CEAS101M10
	C1720	PL. STYRENE CAPACITOR	CQMA561J50
	C1721	ELECTR.CAPACITOR	CEAS2R2M50
	C1722	CERAMIC CAPACITOR	CCCSL221J50
	C1723	CERAMIC CAPACITOR	CCCSL151J50
	C1724	CERAMIC CAPACITOR	CCCCH180J50
	C1725	CERAMIC CAPACITOR	CCCSL220J50
	C1726	CERAMIC CAPACITOR	CKCYB472K50
	C1727	ELECTR.CAPACITOR	CEAS101M10
	C1728, 1729	ELECTR.CAPACITOR	CEAS470M16
	C1730, 1731	ELECTR.CAPACITOR	CEAS2R2M50
	C1732, 1733	ELECTR.CAPACITOR	CEAS470M16
	C1734	CERAMIC CAPACITOR	CCCSL100D50
	C1735	CERAMIC CAPACITOR	CKDYF103Z50
	C1736	CERAMIC CAPACITOR	CCCSL070D50
	C1737 – 1740	ELECTR.CAPACITOR	CEAS470M16
	C1747, 1748	ELECTR.CAPACITOR	CEAS470M16
	C1753	CERAMIC CAPACITOR	CCCSL470J50
	C1749	CERAMIC CAPACITOR	CCDSL220J50

RESISTORS

Mark	No.	Description	Parts No.
		All resistors	RD1/8PM☐☐☐J

OTHERS

Mark	No.	Description	Parts No.
	CN	PIN JACK 3P (VIDEO OUT)	AKB1170
	CN25	CONNECTOR (9P)	KPE9

● BARRIER assembly (AWZ3825)

RESISTORS

Mark	No.	Description	Parts No.
	R1	CARBONFILM RESISTOR	RD1/8PM102J

5. ADJUSTMENTS

5.1 TUNER SECTION

1. Connect the wires as shown in Fig. 5−1 (FM ANT. terminal : 75Ω).
2. When the SD model is used, set the band select switch to AM : 10kHz/FM : 100kHz.

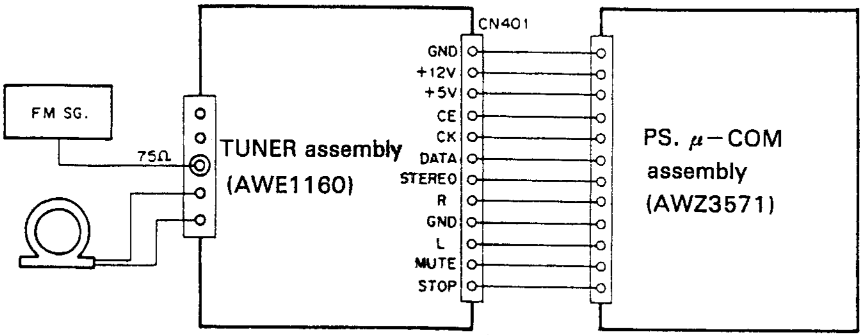


Fig. 5−1

FM Section

Note: Stereo modulation: Main 1kHz L+R ±68.25kHz
Pilet 19 kHz ±6.75kHz

Order	Item	SSG			Receiving frequency	Adjustment	
		Frequency	Modulation	Level		Adjustment location	Remarks
1	Checking front end VT	No signal			108MHz	——	Check that the voltage between terminal 41 and ground is 8.7 ±2.0V.
2	Checking front end VT				87.5MHz	——	Check that the voltage between terminal 41 and ground is 3.4±1.5V.
3	Increasing front end sensitivity	98MHz		Weak input	98MHz	L402, L404, T402	Set the voltage between terminal 43 and ground to maximum, and check that the practical sensitivity is as specified.
4	Center adjustment	98MHz		60dBμV	98MHz	L431	Adjust the voltage between terminals 45 and 46 to 0±50mV.
5	Checking monophonic distortion	98MHz	**1kHz ±75kHz dev.**	60dBμV	98MHz	——	Check that the monophonic distortion is as specified.
6	Adjusting VCO		**OFF**	60dBμV		VR451	Adjust the output of terminal 44 to 76.0kHz±1.0kHz.
7	Adjusting stereo distortion	98MHz	L−ONLY R−ONLY	60dBμV	98MHz	T402	Minimize the distortion within 1/4 rotation of the core,and check conformity to the specification.
8	Checking separation	98MHz	L−ONLY R−ONLY	60dBμV	98MHz	——	Check that the separation of L→R and R→L is as specified.
9	Checking lighting levels of TUNED and STEREO IND.	98MHz	STEREO		98MHz	——	Check that the lighting levels of TUNED and STEREO IND. are as Specified.

AM Section

Order	Item	SSG			Receiving frequency	Adjustment	
		Frequency	Modulation	Level		Adjustment location	Remarks
1	Checking front end VT	No signal			1700kHz	—	Check that the voltage between terminal 41 and ground is 7.5 ±1.0V.
2	Checking front end VT				530kHz	—	Check that the voltage between terminal 41 and ground is 1.5±0.5V.
3	Checking front end sensitivity	1000kHz	400kHz 30% MOD.	Practical sensitivity level	1000kHz	—	Check that the practical sensitivity (maximum sensitivity) is as specified.
4	Adjusting lighting level of TUNED IND.	1000kHz			1000kHz	VR431	Adjust the lighting level of TUNED IND. to 55dBμV/m ±3dB.

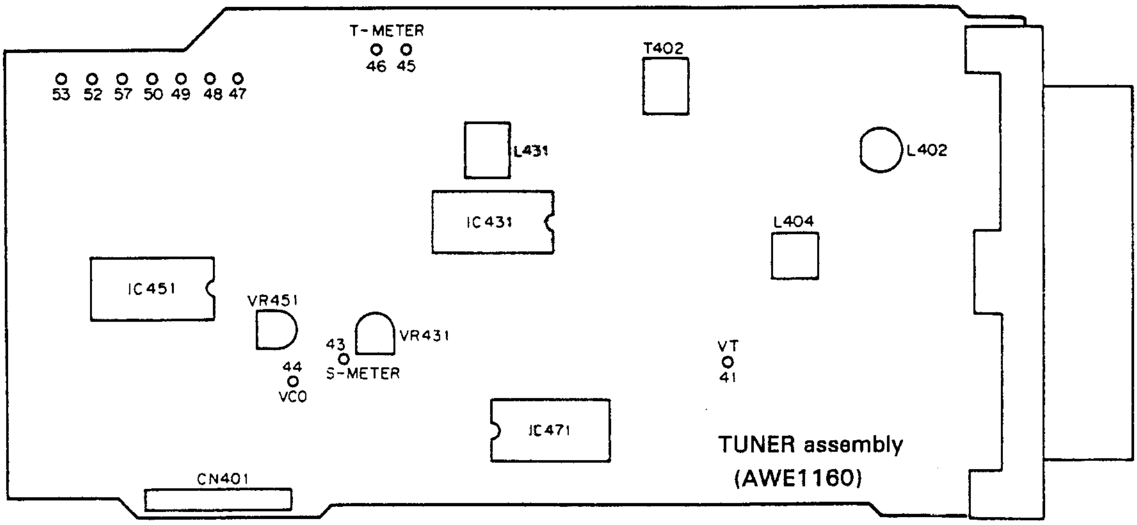

T-METER
46 45
T402
53 52 57 50 49 48 47
L431
L402
IC431
L404
IC451
VR451
VR431
43
S-METER
44
VCO
VT
41
IC471
TUNER assembly
(AWE1160)
CN401

Fig. 5−2 Adjustment points

5.2 DSP ASSEMBLY SECTION (Refer to Fig. 5－4)

- Set the MUSTER VOLUME to the minimum.

1) A/D DC Bias Adjustment

- Set the INPUT SELECTOR to LINE. Set the LINE INPUT terminal to input disabled.
- Adjust the output voltage of pins 1 (ADIN1) and 23 (ADIN2) of IC1103 (LC7886) as follows :
  - a) Measure the value of pin 3 (AVDD) of IC1103. Divide the value in half and record that value (1/2 AVDD).
  - b) Adjust the voltage of pin 1 (ADIN1) at VR1101 to the recorded value (1/2 AVDD) ±0.005V.
  - c) Adjust the voltage of pin 23 (ADIN2) at VR1102 to the recorded value (1/2 AVDD) ±0.005V.

2) Dolby Level Adjustment

- Input sine wave signal of 1kHz, 260mV to the LINE input. Rch only.
- Set the INPUT SELECTOR to the LINE.
- Set the SURROUND MODE switches to the DANCE.
- Turn the JOG dial to set the EFFECT level to "5."
- Check value of R1264.
- Adjust with VR1201 so that the output of the R1263 lead (A) (nothing is connected) of the DSP assembly becomes the following :

  50mV±5mV when R1264 is 5.6kΩ.
  63mV±5mV when R1264 is 7.5kΩ.

NOTE :

- *VR 1103 is for adjusting distortion factor.*
- *Adjust it to the mechanical center position.*

5.3 OSD ASSEMBLY SECTION (Refer to Fig. 5－4)

1) Adjusting H. SYNC and V. SYNC for Superimposed Display.

- Adjust the VR1502 so that the application of power without any signal causes the OSD assembly's TP (H. sync) to show a frequency of 15.75kHz±50Hz.
- Adjust the VR1501 so that the application of power without any signal causes the OSD assembly's TP (V. sync) to show a frequency of 53Hz±1Hz.

2) Adjusting the Superimposed Display in the Center

- Connect the VIDEO OUT (TO MONITOR TV) terminal to a monitor TV.
- Select one of JASS THEATERS of the SURROUND MODE switch.
- Turn the JOG dial to display "Effect Level 100". Then adjust the TC1501 to center the superimposed display "Effect Lavel 100", leaving equal margin on both right and left of the TV screen.

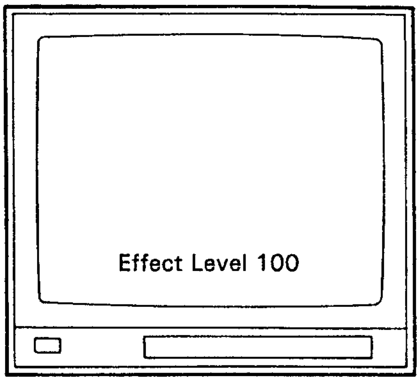


Fig. 5－3

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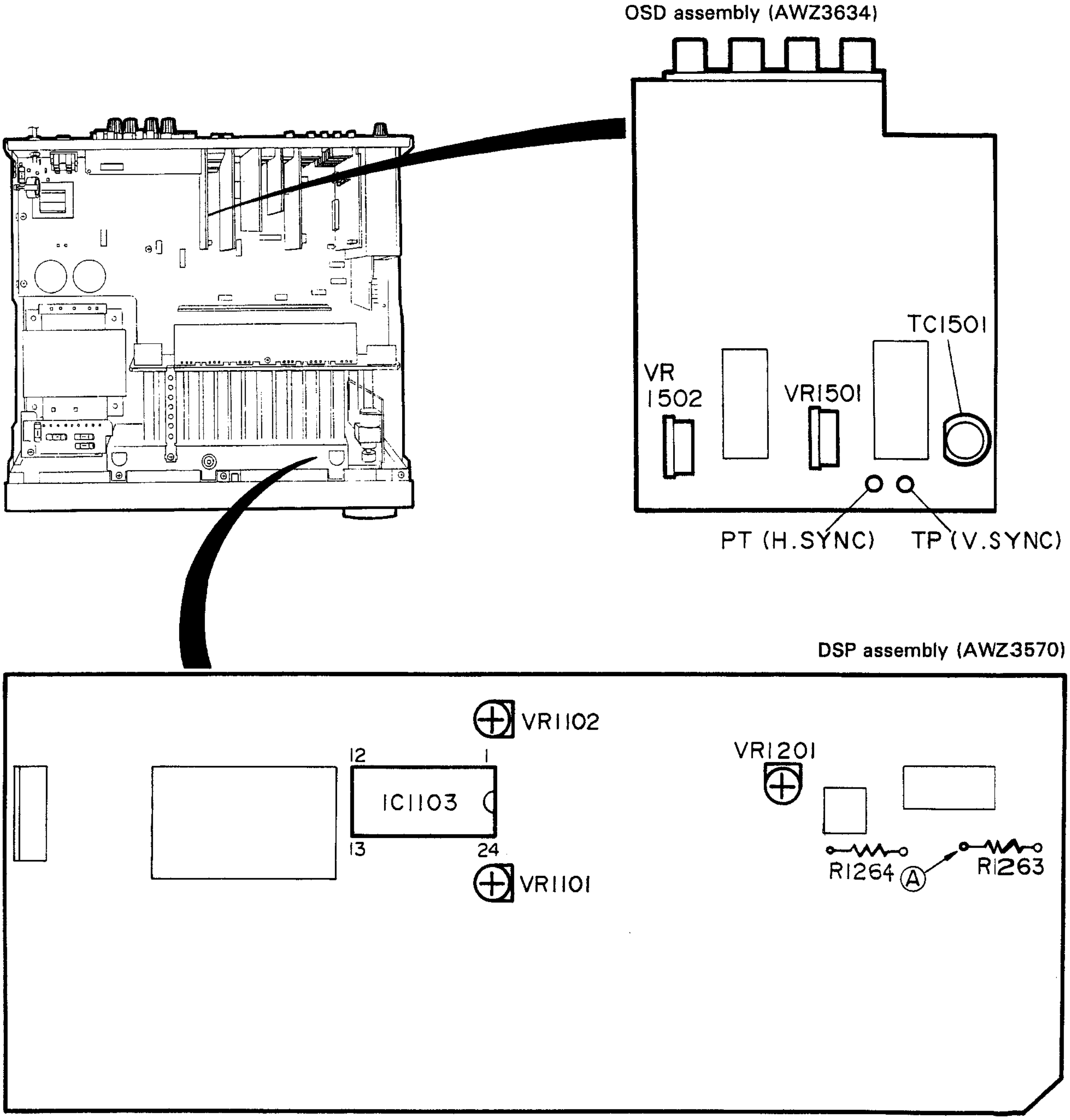

OSD assembly (AWZ3634)
TC1501
VR
1502
VR1501
PT (H.SYNC)
TP (V.SYNC)
DSP assembly (AWZ3570)
VR1102
12
1
IC1103
13
24
VR1101
VR1201
R1264
Ⓐ
R1263

Fig. 5−4 Adjustment points

6. IN INFORMATION

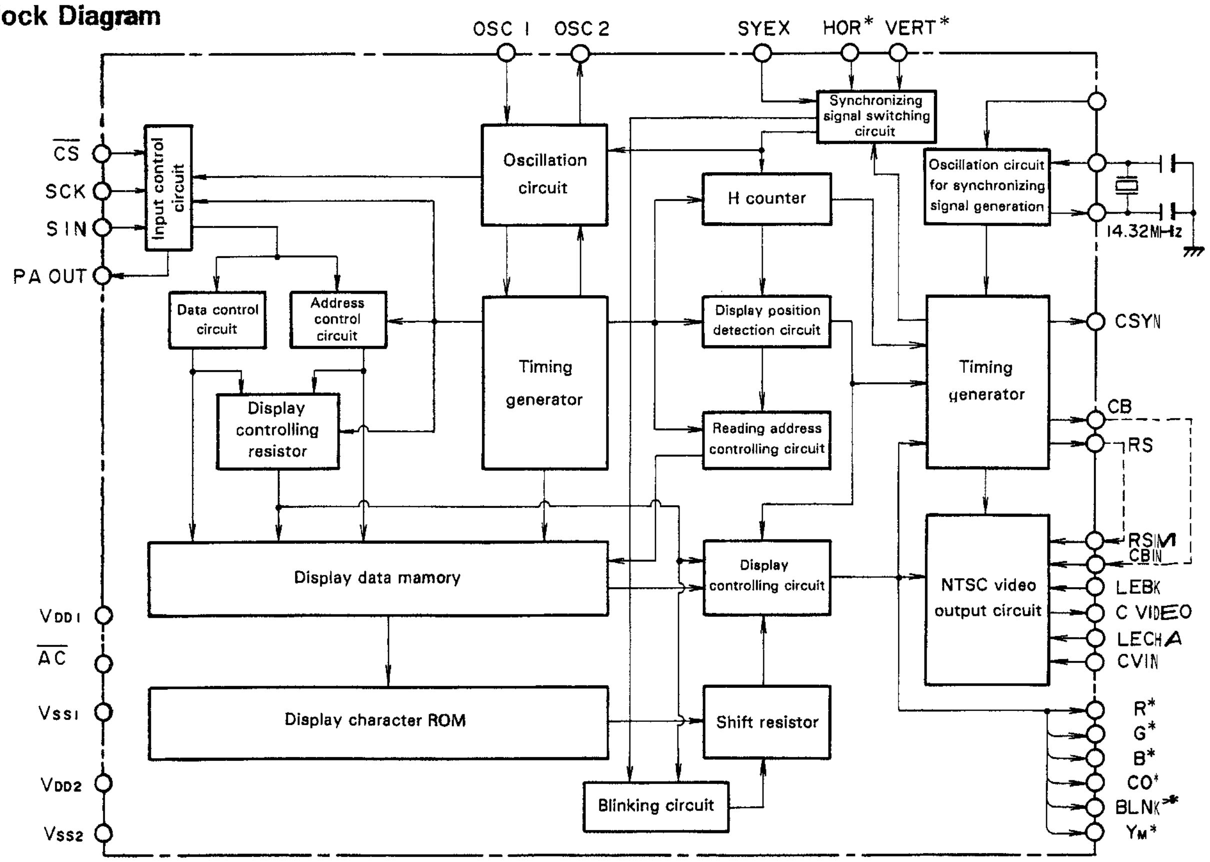
■ IC1502 (M50554−003SP) : OSD IC

• Pin Function

No.	Symbol	Pin Name	Description
1	Vss1	Ground terminal	Connect to GND using a digital ground terminal.
2	SCK	Serial clock input	Collects serial data of SIN at the leading edge of SCK when the CS terminal is LOW. Hysteresis input. Equipped with a pull−up resistor.
3	$\overline{AC}$	Auto clear input	Resets the IC internal circuit when the mode is LOW. Equipped with a pull−up resistor. Hysteresis input.
4 5	OSC1 OSC2	Oscillation circuit external terminal	An external terminal for the display oscillation circuit. The standard oscillation frequency is approximately 7MHz. The oscillation frequency determines the horizontal display position and the character width on the TV monitor.
6	N/$\overline{P}$	NTSC/PAL switching input	A synchronizing signal switching terminal for NTSC or PAL. Synchronizing signals in NTSC are generated when the mode is HIGH. Synchronizing signals in PAL are generated when the mode is LOW. Equipped with a pull−up resistor.
7	$\overline{CS}$	Chip select input	A chip select terminal. Goes LOW when performing serial data transmission. Equipped with a pull−up resistor.
8	SIN	Serial date input	Inputs data and address of memory for the display controlling resistor and the display data. Equipped with a pull−up resistor.
9	PAOUT	Parity output	An odd parity output. Detects a 1−bit error in a word of SIN.
10	SYEX	Synchronizing signal switching input	A switching terminal of the external or internal synchronizing signals. Changes to the external synchronizing signal when the mode is HIGH. Changes to internal synchronizing signal when the mode is LOW. SYEX atructures the logical or of the EX resistor of address 243 in the display controlling resistor and the internal synchronization priority. Equipped with a pull−up resistor.
11	Vss2	Ground terminal	Connect to GND using an analog ground terminal.
12	CVIDEO	Composite video output	An output terminal of compound video signals. Outputs 2Vp−p compound video signals. During the superimpose mode, outputs by superimposing character output to the CVIN signal.
13	CVIN	Compound video input	An input terminal of compound video signals. During the superimpose mode, character output, etc. will be superimposed to the compound video signal.
14	LEBK	Blanking level	An input terminal to detemine the blanking level of the video signal.
15	LECHA	Character level input	An input terminal to determine the character output level of the video signal. The color of characters is white.
16	CBIN	Color burst signal input	Converts the CB output to the color burst signal level of the video signal at the external circuit and inputs it.
17	RSIN	Character background carrier color signal input	Converts the RS output to the carrier color signal level of the video signal at the external circuit and inputs it.
18	VDD2	Power terminal	Connect to +5V using an analog power terminal.
19	RS	Character background carrier color signal output	A carrier color signal output for color character background. Outputs signals with a phase angle to the color burst signal CB. Amplification: 5V
20	CB	Color burst signal output	Output color burst signals of 3.58MHz for NTSC and 4.43MHz for PAL.

No.	Symbol	Pin Name	Description
21	YM*	Luminance signal output	Outputs the luminance signal. Can select polarity when specifying the font ROM.
22	BLNK*	Character background output	Outputs the character background signal. Can select polarity when specifying the font ROM.
23	CO*	Character output	Outputs the character signal. Can select polarity when specifying the font ROM.
24	B*	Blue output	A blue output terminal. Can select polarity when specifying the font ROM.
25	G*	Green output	A green output terminal. Can select polarity when specifying the font ROM.
26	R*	Red output	A red output terminal. Can select polarity when specifying the font ROM.
27	CSYN	Compound synchronizing signal output	Outputs compound synchronizing signal in NTSC or PAL. Negative polarity. Amplification: 5V
28	OSCOUT	Oscillation circuit for synchronous signal generation	an external terminal of the oscillation circuit for synchronizing signal generation. Uses an oscillation frequency of 14.32MHz for NTSC and 17.73MHz for PAL.
29	OSCIN		
30	HOR*	Horizontal synchronizing signal	Inputs the horizontal synchronizing signal. Hysteresis input. Can select polarity when specifying the font ROM.
31	VERT*	Vertical synchronizing signal	Inputs the vertical synchronizing signal. Hysteresis input. Can select polarity when specifying the font ROM.
32	VDD	Power terminal	Connect to +5V using a digital power terminal.

- **Block Diagram**


OSC 1
OSC 2
SYEX
HOR*
VERT*
Synchronizing signal switching circuit
CS
SCK
SIN
PA OUT
Input control circuit
Oscillation circuit
H counter
Oscillation circuit for synchronizing signal generation
14.32MHz
Data control circuit
Address control circuit
Timing generator
Display position detection circuit
Timing generator
CSYN
Display controlling resistor
Reading address controlling circuit
CB
RS
RSIN
CBIN
Display data mamory
Display controlling circuit
NTSC video output circuit
LEBK
C VIDEO
LECHA
CVIN
VDD1
AC
VSS1
Display character ROM
Shift resistor
VDD2
VSS2
Blinking circuit
R*
G*
B*
CO*
BLNK*
YM*

■ IC1901 (PDG072A) : DISPLAY CONTROL μ–COM)

• Pin Function

No.	Pin Name	I/O	Description	Logic
1	S4/PG0	O	Segment output	
2	S5/PG1	O	Segment output	
3	S6/PG2	O	Segment output	
4	S7/PG3	O	Segment output	
5	S8/PKO	O	Segment output	
6	S9/PK1	O	Segment output	
7	S10/PK2	O	Segment output	
8	S11/PK3	O	Segment output	
9	S12/PJ0	O	Segment output	
10	S13/PJ1	O	Segment output	
11	S14/PJ2	O	Segment output	
12	S15/PJ3	O	Segment output	
13	S16/T15	O	Segment output	
14	S17/T14	O	Segment output	
15	S18/T13	O	Segment output	
16	S19/T12	O	Segment output	
17	S20/T11	O	Segment output	
18	S21/T10	O	Grid output & Key Scan output	
19	S22/T9	O	Grid output & Key Scan output	
20	S23/T8	O	Grid output & Key Scan output	
21	T7	O	Grid output & Key Scan output	
22	T6	O	Grid output & Key Scan output	
23	T5	O	Grid output & Key Scan output	
24	T4	O	Grid output & Key Scan output	
25	T3	O	Grid output & Key Scan output	
26	T2	O	Grid output & Key Scan output	
27	T1	O	Grid output & Key Scan output	
28	T0	O	Grid output & Key Scan output	
29	INT	I	Detection of video signal existence. When the video signal is not input, output the video signal (blue) to video out terminal. L···Exist H···Not exist	
30	TX	–	Not used	
31	TEX	I	Not used	
32	$\overline{RST}$	I	RESET input	
33	NC	–		
34	V_{DD}	–	+5V Power supply	
35	PI0/AD0	I	DC input for Level meter	
36	PI1/AD1	I	DC input for Level meter	
37	PI2/AD2	I	DC input for Level meter	
38	PI3/AD3	I	DC input for Level meter	
39	PBO/AD4	I	DC input for Level meter	
40	PB1/AD5	I	Over load Det.	
41	PB2/AD6	I	Remote control B input	
42	PB3/AD7	I	RQ. I (Request input)	
43	$\overline{EC}$			
44	PX0/$\overline{SC}$	I	CK Cmmunication	
45	PX1/SO	0	SO	
46	PX2/SI	I	SI	
47	PAO	O	LED (MR&S) control output	
48	PA1	O	LED (TUNING) control output	
49	PA2	I	Key scan input	

No.	Pin Name	I/O	Description	Logic
50	PA3	I	Key scan input	
51	PF0	I	Key scan input	
52	PF1	I	Key scan input	
53	PF2	I	Key scan input	
54	PF3	I	Key scan input	
55	PE0	0	LED (CHARACT) control output	
56	PE1	O	LED (ENHANCE) control output	
57	PE2	O	LED (DELAY) control output	
58	PE3	O	LED (EFFECT) control output	
59	PY0	O	RQ. O (Communication between PDG073A)	
60	PY1/$\overline{\text{PWM}}$	O	MUTE for TUNER	
61	PY2/WP	I	Not used	
62	PY3/REM	I	Remote control input	
63	PD0	I	Rotary Encoder IN1	
64	PD1	I	Rotary Encoder IN2	
65	PD2	I	Tuned	
66	PD3	I	Stereo	
67	PC0	O	DATA. T, 9K/$\overline{\text{10K}}$ Tuner control OSD DATA	
68	PC1	O	CK. T, J/$\overline{\text{EX}}$ OSD CK	
69	PC2	O	CS. T	
70	PC3	O	OSD CS	
71	Vss	–	GND	
72	XTAL	O	MAIN CLK output/Connected to ceramic oscillator (4.19M)	
73	NC	–	NC	
74	EXTAL	I	MAIN CLK input/Connected to ceramic oscillator (4.19M)	

No.	Pin Name	I/O	Description	Logic
75	VREF	–	Reference voltage input/ Connected to VDD	
76	VFDP	–	Power supply for FL	
77	S0	O	Segment output	
78	S1	O	Segment output	
79	S2	O	Segment output	
80	S3	O	Segment output	

■ IC1851 (PDG073A) : SYSTEM CONTROL μ−COM

- **Pin Function**

No.	Pin Name	I/O	Description	ACT
1	PA1	O	CLOCK for CXD1067	H
2	PA0	O	VIDEO control (VON2)	
3	PB7	O	VIDEO control (C2)	
4	PB6	O	VIDEO control (VON1)	
5	PB5	O	VIDEO control (C1)	
6	PB4	O	Serial IC CLOCK	L
7	PB3	O	Serial IC DATA	
8	PB2	O	Strobe for MAIN TC9163.9164	H
9	PB1	O	Strobe for SUB TC9163.9164	H
10	PB0	O	Strobe for VR TC9154.9176	H
11	PC7	O	Multiroom ON (H) /OFF (L)	
12	PC6	O	VR LED "H" = ON	H
13	PC5	O	VR UP	H
14	PC4	O	VR DN	H
15	PC3	O	Not used (L)	
16	PC2	O	Not used (L)	
17	PC1	O	Not used (L)	
18	PC0	O	DOLBY	
19	PD7	O	MUTE	
20	PD6	O	CENTER CONTROL B	
21	PD5	O	CENTER CONTROL A	
22	PD4	O	GAIN CONTROL B	
23	PD3	O	GAIN CONTROL A	L
24	PD2	O	REQ OUT (Comunication between μ−COM)	L
25	PD1	O	CLOCK OUT (Comunication between μ−COM)	
26	PD0	O	DATA OUT (Comunication between μ−COM)	
27	PH3	O	DSP CTL D−REDY	

No.	Pin Name	I/O	Description	ACT
28	PH2	O	DSP CTL RESET. D DSP	
29	PH1	O	DSP CTL RQ	
30	PH0	O	Front μ−COM RESET output	L
31	MP	I	Connected to GND	−
32	$\overline{\text{RST}}$	I/O	RESET input	L
33	Vss	−	Connected to GND	−
34	XTAL	O	Connected to ceramic oscillator (8MHz).	−
35	EXTAL	I	Connected to ceramic oscillator (8MHz).	−
36	$\overline{\text{CSO}}$	I	Not used (Pull-down)	−
37	S10	I	Not used (Pull-down)	−
38	S00	O	DSP CTL DATA	
39	$\overline{\text{SCKO}}$	O	DSP CTL CLOCK	L
40	PF7	I	DSP CTL $\overline{\text{AK}}$	"L"
41	PF6	I	REQ IN (Comunication between μ−COM)	L
42	PF5	I	DATA IN (Comunication between μ−COM)	
43	PF4	I	Not used (Pull-down)	−
44	PF3	I	Not used (Pull-down)	−
45	PF2	I	Not used (Pull-down)	−
46	PF1	I	Not used (Pull-down)	−
47	PF0	I	Not used (Pull-down)	−
48	AN3	I	Not used (Pull-down)	−
49	AN2	I	Not used (Pull-down)	−
50	AN1	I	Not used (Pull-down)	−
51	AN0	I	VR position detector input	−
52	AVss	−	GND for A/D	−
53	AVREF	−	Reference voltage for A/D	−
54	AVDD	−	Power supply for A/D	−

No.	Pin Name	I/O	Description	ACT
55	PG7	I	Not used (Pull-down)	–
56	PG6	I	Not used (Pull-down)	–
57	PG5	I	Not used (Pull-down)	–
58	PG4	I	Not used (Pull-down)	–
59	PG3	I	Not used (Pull-down)	–
60	PG2	I	Not used (Pull-down)	–
61	PG1	I	Not used (Pull-down)	–
62	PG0	I	Not used (Pull-down)	–
63	PE7	O	Speaker (REAR) relay control	H
64	PE6	O	Speaker A relay control	H
65	PE5	O	Speaker B relay control	H
66	PE4	O	Speaker (CENTER) relay control	H
67	PE3	O	Speaker (SUB) relay control	H
68	PE2	O	PWM output for enhancer	H
69	PE1/$\overline{\text{INT2}}$	I	Not used (Pulldown)	–
70	PE0/$\overline{\text{INT0}}$	I	AC 50/60Hz input	L
71	NMI	I	Not usewd (Pulldown)	–
72	V_{DD}	–	Power supply	–
73	Vss	–	GND	–
74	NC	–	Connected to V_{DD}	–
75	PA7	O	AC Relay control	H
76	PA6	O	SR OUT	L
77	PA5	O	MAIN MUTE	H
78	PA4	O	SUB MUTE	H
79	PA3	O	Strobe for CXP1067	H
80	PA2	O	DATA for CXP1067	

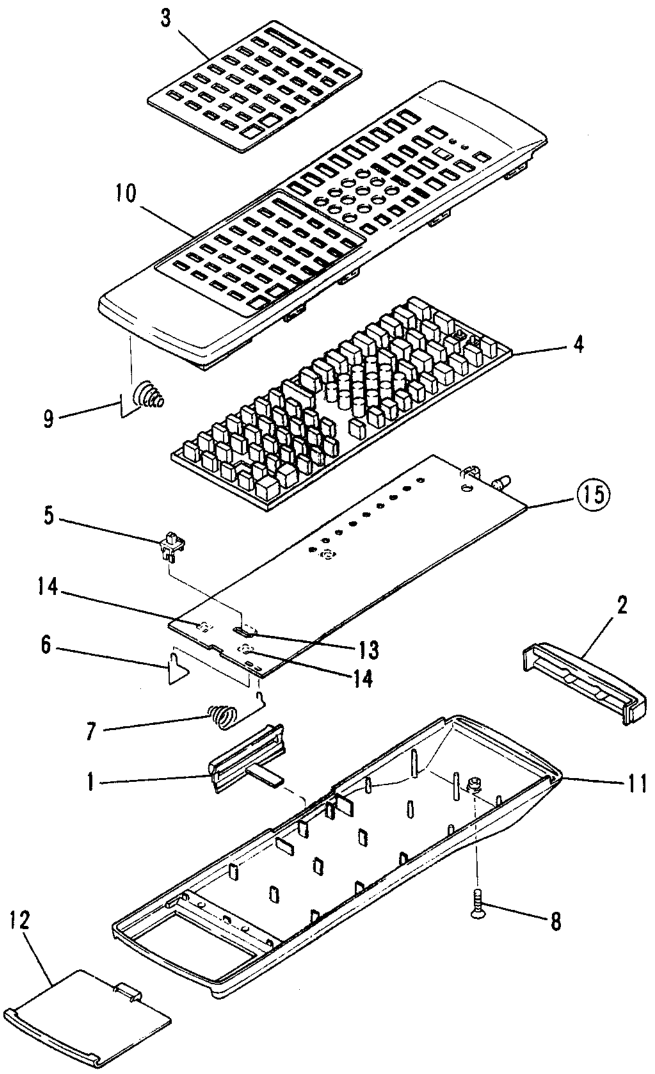
7. REMOTE CONTROL UNIT [CU – VSX031 (AXD1223)]
[CU – VSX023 (AXD1207)]

7.1 EXPLODED VIEW AND PARTS LIST

NOTES:
- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

Parts list of Exterior

Mark	No.	Description	Parts No.
	1	MODE CHECK KEY	AZA1335
	2	FILTER	AZA1336
	3	PLATE (AXD1223)	AZA1346
	3	PLATE (AXD1207)	AZA1345
	4	RUBBER SHEET (AXD1223)	AZA1348
	4	RUBBER SHEET (AXD1207)	AZA1347
	5	KNOB	AZA1349
	6	TERMINAL (+)	AZB1327
	7	TERMINAL (−)	AZB1328
	8	SCREW	AZB1329
	9	TERMINAL (C)	AZB1330
	10	CASE (A)	AZN2089
	11	CASE (B)	AZN2090
	12	BATTERY COVER	AZN2091
	13	SLIDE SW	AZS1117
	14	TACT SW	AZS1118
	15	P. C. BOARD	



7.2 ELECTRICAL PARTS LIST

NOTES:

- *Parts without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω 56×10^1 561........................ RD1/4PS$\boxed{5}\boxed{6}\boxed{1}$J
47kΩ 47×10^3 473........................ RD1/4PS$\boxed{4}\boxed{7}\boxed{3}$J
0.5Ω 0R5.. RN2H$\boxed{0}\boxed{R}\boxed{5}$K
1Ω 010.. RS1P$\boxed{0}\boxed{1}\boxed{0}$K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ 562×10^1 5621...................... RN1/4SR$\boxed{5}\boxed{6}\boxed{2}\boxed{1}$F

Mark	No.	Description	Parts No.
	SEMICONDUCTORS		
	IC1	μ−COM	ACM001−017
	IC2	IC	AZC1564
	IC3	LOGIC IC	MC74HC138F
	Q1, 2	CHIP TRANSISTOR	2SC3052E
	Q3, 4	POWER TRANSFORMER	2SD1622
	D1	DIODE	DWA010−TE
	D10−17	LED	AZC1573
	D2−6	DIODE	DWA010−TE
	D7	LED	SLR−938C
	D8	DIODE	SPS−503C−3
	D9	LED	AZC1573
	CAPACITORS		
	C1, 2	CERAMIC CAPACITOR	CCDSL330J50
	C3	CERAMIC CAPACITOR	CCDSL221J50
	C4	CERAMIC CAPACITOR	CKDYX104M25
	C5	ELECTROLYTIC CAPACITOR	CEAS470M10
	C6	CERAMIC CAPACITOR	CKDYB103K50
	C7	ELECTROLYTIC CAPACITOR	CEAS221M10
	C8	ELECTROLYTIC CAPACITOR	CEAS4R7M50
	RESISTORS		
	R7, 8	CARBON FILM RESISTOR	RD1/4PMFL1R5J
		Other resistors	RD1/8PM□□□J
	OTHERS		
	X1	RESONATOR	AZC1570

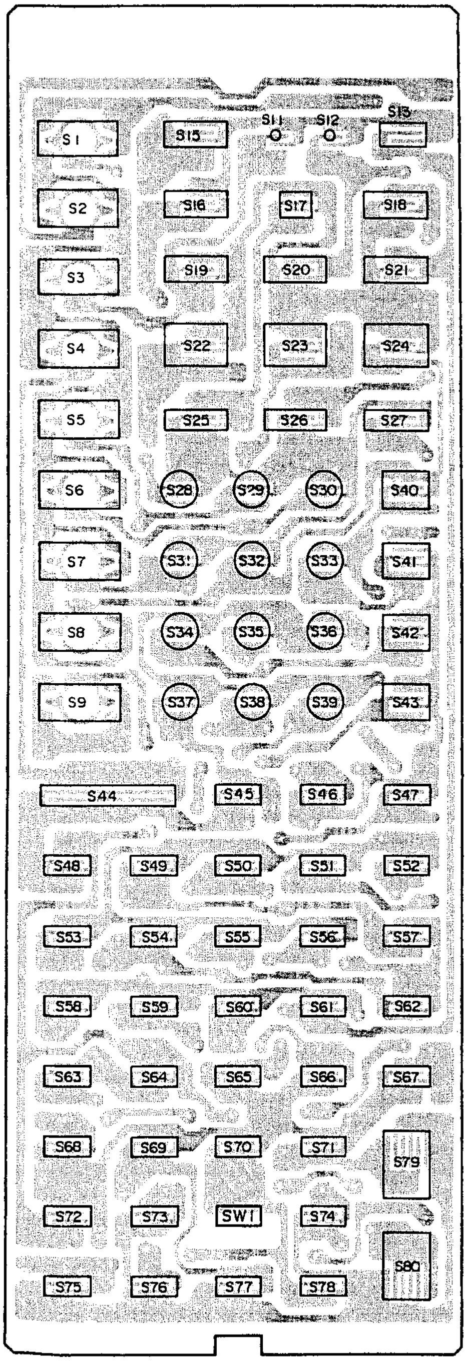
7.3 P. C. BOARD PATTERN

—▭— : Indicates a chip resistor.

╪ : Indicates a chip capacitor.

: Indicates a chip transistor.

: Indicates a chip diode.


S1
S2
S3
S4
S5
S6
S7
S8
S9
S11
S12
S13
S15
S16
S17
S18
S19
S20
S21
S22
S23
S24
S25
S26
S27
S28
S29
S30
S31
S32
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S63
S64
S65
S66
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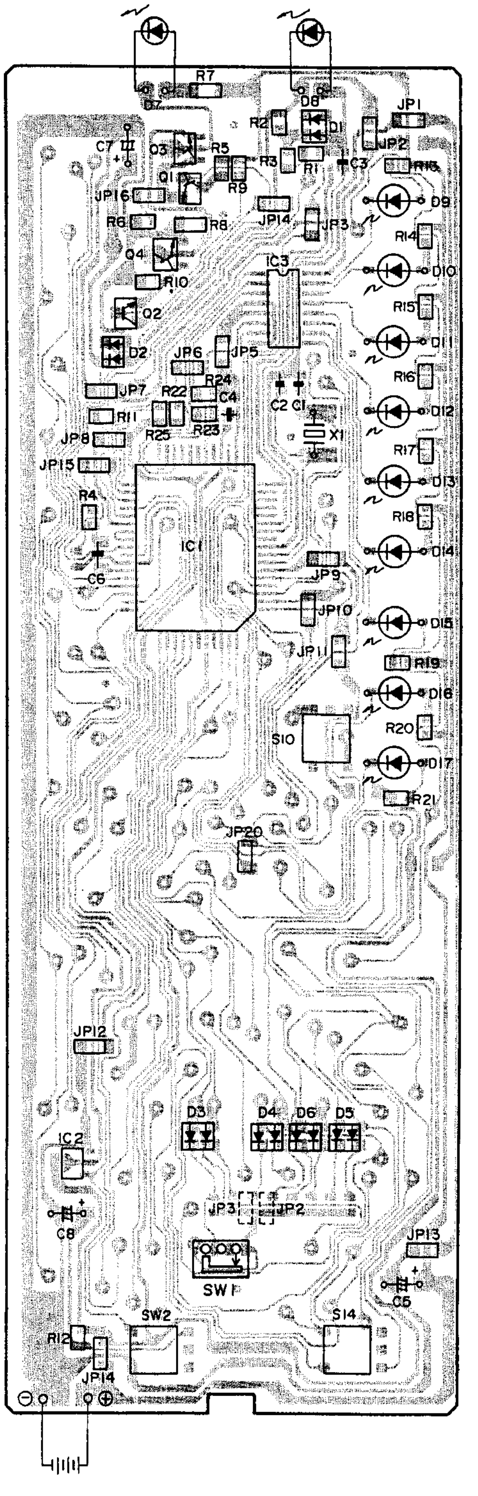
S76
S77
S78
S79
S80


R7
D7
D8
D1
JP1
JP2
R2
C7
Q3
R5
R3
R1
C3
R13
Q1
R9
JP16
R6
R8
JP14
JP3
D9
R14
Q4
IC3
D10
R10
Q2
R15
D11
D2
JP6
JP5
R24
R16
JP7
R22
C4
C2
C1
D12
R11
R25
R23
X1
JP8
R17
JP15
D13
R4
R18
IC1
D14
C6
JP9
JP10
D15
JP11
R19
D16
S10
R20
D17
R21
JP20
JP12
D3
D4
D6
D5
IC2
JP3
JP2
C8
JP13
SW1
C5
SW2
S14
R12
JP14
⊖
⊕

7.4 SCHEMATIC DIAGRAM

NOTE)

JP2 : The terminal for switching Fc (carrier frequency of the fixed code). This terminal is set at OPEN (Fc = 40kHz) when delivered. If a product of another manufacturer accidentally receives the PIONEER code, short the terminal so that Fc will be 36.7kHz. (In which case, the learned code and preset code do not change.)

JP3 : This remote control saves the learned data, timing data in ROM and other data (such as code data) in RAM. ROM already contains the timing data for other primary manufacturers. JP3 is a terminal for switching whether or not to use that pre-loaded timing data during learning.

This terminal is set at OPEN when delivered. If "data is learned but the product does not operate," there is the rare possibility that learned timing data is affected by the timing data for another primary manufacturer in ROM, causing the receiving product to be deactivated. In such a case, short JP3 to clear all the learned data and restart data learning, so that the data precision is increased. (In which case, the learned data in RAM is shared as is.)

NOTE:

-▭- : Indicates a chipresistor.

╋ : Indicates a chipcapacitor.

: Indicates a chiptransistor.

: Indicates a chipdiode.

1. RESISTORS:

Indicated in Ω, 1/4W, 1/8W, ±5% tolerance unless otherwise noted k:kΩ, M:MΩ, (F):±1%, (G):±2%, (K):±10%, (M):±20% tolerance.

2. CAPACITORS:

Indicated in capacity (μF)/voltage (V) unless otherwise noed p:pF
Indication without voltage is 50V except electrolytic capacitor.

3. OTHERS:

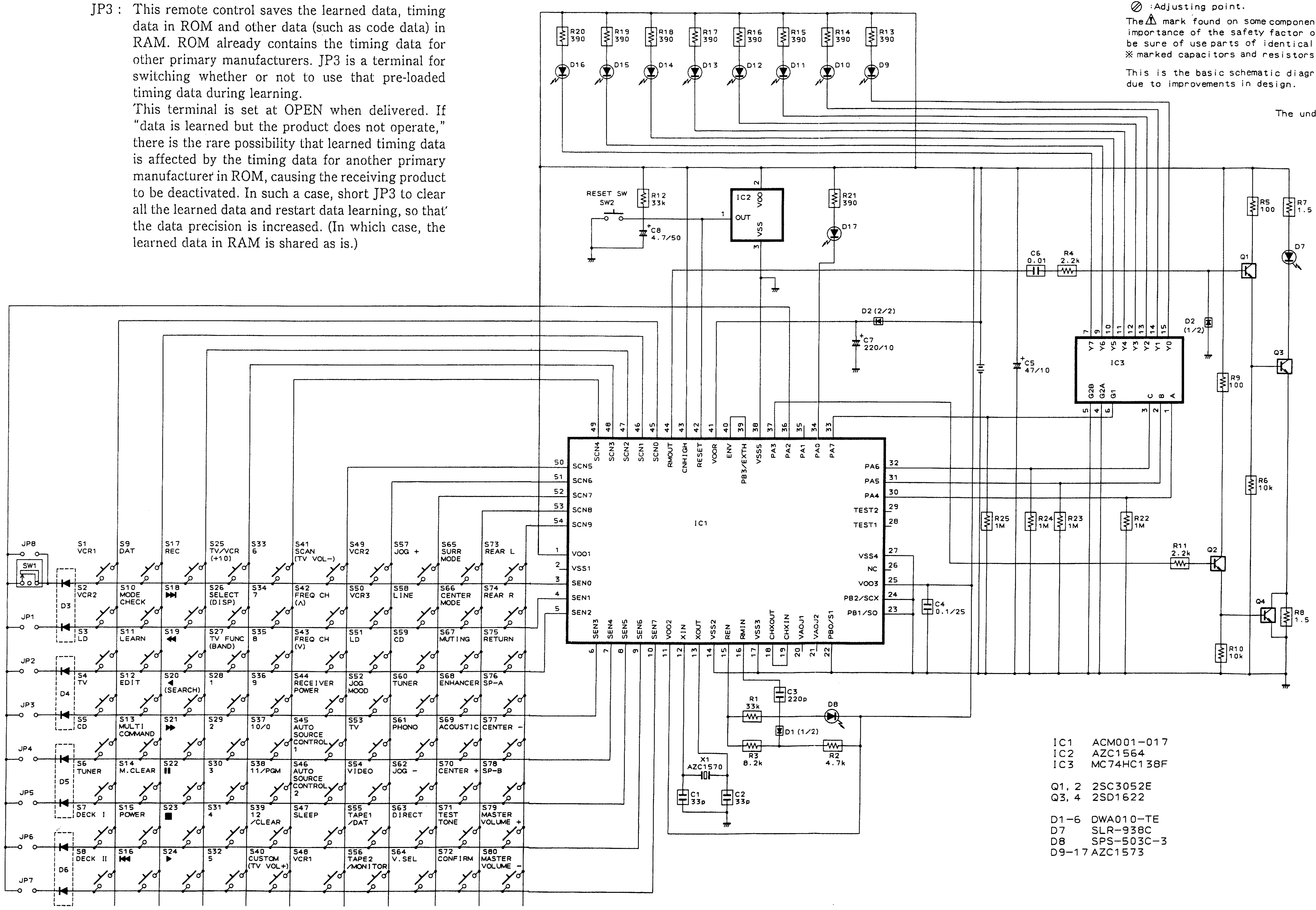
➡ : Signal route.

⊘ : Adjusting point.

The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure of use parts of identical designation.

※ marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.


R20 390
R19 390
R18 390
R17 390
R16 390
R15 390
R14 390
R13 390
D16
D15
D14
D13
D12
D11
D10
D9
RESET SW
SW2
R12 33k
C8 4.7/50
IC2
VDD
OUT
VSS
R21 390
D17
C6 0.01
R4 2.2k
D2 (2/2)
C7 220/10
C5 47/10
IC3
Y7 Y6 Y5 Y4 Y3 Y2 Y1 Y0
G2B G2A G1 C B A
D2 (1/2)
R5 100
R7 1.5
D7
Q1
Q3
R9 100
R6 10k
Q2
R11 2.2k
Q4
R8 1.5
R10 10k
IC1
SCN4 SCN3 SCN2 SCN1 SCN0 RMOUT CNHIGH RESET VDOR ENV PB3/EXTH VSS5 PA3 PA2 PA1 PA0 PA7
SCN5 SCN6 SCN7 SCN8 SCN9
VDD1 VSS1 SEN0 SEN1 SEN2
PA6 PA5 PA4 TEST2 TEST1
VSS4 NC VDD3 PB2/SCX PB1/SO
SEN3 SEN4 SEN5 SEN6 SEN7 VDD2 XIN XOUT VSS2 REN RMIN VSS3 CHXOUT CHXIN VAOJ1 VAOJ2 PB0/SI
R25 1M
R24 1M
R23 1M
R22 1M
C4 0.1/25
C3 220p
R1 33k
D8
D1 (1/2)
R3 8.2k
R2 4.7k
X1 AZC1570
C1 33p
C2 33p
JP8
SW1
JP1
JP2
JP3
JP4
JP5
JP6
JP7
D3
D4
D5
D6
S1 VCR1
S2 VCR2
S3 LD
S4 TV
S5 CD
S6 TUNER
S7 DECK I
S8 DECK II
S9 DAT
S10 MODE CHECK
S11 LEARN
S12 EDIT
S13 MULTI COMMAND
S14 M.CLEAR
S15 POWER
S16 ⏮
S17 REC
S18 ⏭
S19 ◀◀
S20 ◀ (SEARCH)
S21 ▶▶
S22 ⏸
S23 ■
S24 ▶
S25 TV/VCR (+10)
S26 SELECT (DISP)
S27 TV FUNC (BAND)
S28 1
S29 2
S30 3
S31 4
S32 5
S33 6
S34 7
S35 8
S36 9
S37 10/0
S38 11/PGM
S39 12 /CLEAR
S40 CUSTOM (TV VOL+)
S41 SCAN (TV VOL-)
S42 FREQ CH (∧)
S43 FREQ CH (∨)
S44 RECEIVER POWER
S45 AUTO SOURCE CONTROL 1
S46 AUTO SOURCE CONTROL 2
S47 SLEEP
S48 VCR1
S49 VCR2
S50 VCR3
S51 LD
S52 JOG MOOD
S53 TV
S54 VIDEO
S55 TAPE1 /DAT
S56 TAPE2 /MONITOR
S57 JOG +
S58 LINE
S59 CD
S60 TUNER
S61 PHONO
S62 JOG -
S63 DIRECT
S64 V.SEL
S65 SURR MODE
S66 CENTER MODE
S67 MUTING
S68 ENHANCER
S69 ACOUSTIC
S70 CENTER +
S71 TEST TONE
S72 CONFIRM
S73 REAR L
S74 REAR R
S75 RETURN
S76 SP-A
S77 CENTER -
S78 SP-B
S79 MASTER VOLUME +
S80 MASTER VOLUME -

IC1 ACM001-017
IC2 AZC1564
IC3 MC74HC138F

Q1, 2 2SC3052E
Q3, 4 2SD1622

D1-6 DWA010-TE
D7 SLR-938C
D8 SPS-503C-3
D9-17 AZC1573

The underline indicates the switch position

SW1 : CENT.·BAL./REAR·REAR BAL.
SW2 : RESET
S1 : VCR1
S2 : VCR2
S3 : LD
S4 : TV
S5 : CD
S6 : TUNER
S7 : DECK I
S8 : DECK II
S9 : DAT
S10 : MODE CHECK
S11 : LEARN
S12 : EDIT
S13 : MULTI COMMAND
S14 : M.CLEAR
S15 : POWER
S16 : ⏮
S17 : REC
S18 : ⏭
S19 : ◀◀
S20 : ◀ (SEARCH)
S21 : ▶▶
S22 : ⏸
S23 : ■
S24 : ▶
S25 : TV/VCR (+10)
S26 : SELECT (DISP)
S27 : TV FUNC (BAND)
S28 : 1
S29 : 2
S30 : 3
S31 : 4
S32 : 5
S33 : 6
S34 : 7
S35 : 8
S36 : 9
S37 : 10/0
S38 : 11/PGM
S39 : 12/CLEAR
S40 : CUSTOM (TV VOL+)
S41 : SCAN (TV VOL-)
S42 : FREQ CH (∧)
S43 : FREQ CH (∨)
S44 : RECEIVER POWER
S45 : AUTO SOURCE CONTROL 1
S46 : AUTO SOURCE CONTROL 2
S47 : SLEEP
S48 : VCR1
S49 : VCR2
S50 : VCR3
S51 : LD
S52 : JOG MODE
S53 : TV
S54 : VIDEO
S55 : TAPE1/DAT
S56 : TAPE2/MONITOR
S57 : JOG +
S58 : LINE
S59 : CD
S60 : TUNER
S61 : PHONO
S62 : JOG -
S63 : DIRECT
S64 : V.SEL
S65 : SURR MODE
S66 : CENTER MODE
S67 : MUTING
S68 : ENHANCER
S69 : ACOUSTIC
S70 : CENTER +
S71 : TEST TONE
S72 : CONFIRM
S73 : REAR L
S74 : REAR R
S75 : RETURN
S76 : SP-A
S77 : CENTER -
S78 : SP-B
S79 : MASTER VOLUME +
S80 : MASTER VOLUME -

8. FOR VSX – 9900S/KUC AND SD TYPES

CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

The VSX – 9900S/KUC and SD types are the same as the VSX – 95/KUC type with the exception of the following sections.

Mark	Symbol & Description	Part No.			Remarks
		VSX – 95/ KUC type	VSX – 9900S/ KUC type	VSX – 9900S/ SD type	
◉	MAIN FUNCTION assembly	AWZ3673	AWZ3560	AWZ3560	
◉	SUB FUNCTION assembly	AWZ3674	AWZ3561	AWZ3561	
◉	VIDEO FUNCTION assembly	AWZ3675	AWZ3562	AWZ3562	
◉	ENHANCER assembly	AWZ3676	AWZ3563	AWZ3563	
◉	OSD assembly	AWZ3634	....	....	
	TERMINAL assembly	....	Non Supply	Non Supply	*
⚠	S2 Voltege selector switch (AC110V – 127V/220V – 240V)	....	....	AKX1004	
⚠	S3 Slide switch (9k/10k)	....	....	ASH – 004	
⚠	S4 Voltege selector switch (AC110V, 120 – 127V, 220V, 240V)	....	....	AKX – 507	
⚠	T Power transformer	ATS1360	ATS1360	ATS1361	
⚠	FU1 Fuse (8A/125V)	AEK1035	AEK1035	....	
⚠	FU1 Fuse (5A/125V)	....	....	AEK – 126	
⚠	FU2 Fuse (5A/125V)	....	....	AEK – 126	
⚠	FU3, FU4 Fuse (6.3A/125V)	AEK – 309	AEK – 309	AEK – 127	
⚠	AC Power cord	ADG1072	ADG1058	ADG1051	
⚠	Fuse holder	....	....	AKR – 038	
	AC cord spacer	ANG1153	....	....	
	Strain relief	....	AEP – 113	AEC – 882	
	FL filter	AAK2169	AAK2168	AAK2168	
	Leg assembly	AMR1158	....	....	
	Front panel	ANB1480	ANB1479	ANB1479	
	Bonnet case	ANE1302	AZN1804	AZN1804	
	Wood collar	AEC1165	....	....	
	Screw	ABA1086	....	....	
	Screw	VBZ40P160FZK	....	....	
	Screw	....	....	VMZ26P040FZK	

*** : TERMINAL assembly of VSX9900S is in same location as OSD assembly of VSX – 95.**

Mark	Symbol & Description	Part No.			Remarks
		VSX – 95/ KUC type	VSX – 9900S/ KUC type	VSX – 9900S/ SD type	
	Top pad	AHA1033	....	....	
	Bottom pad	AHA1034	....	....	
	Front, rear pad	....	AHA1164	AHA1164	
	Packing case	AHD2122	AHD2120	AHD2121	
	Operating instructions (English)	ARB1333	ARB1332	ARB1332	
	Remote control unit (CU – VSX031)	AXD1223	....	....	
	Remote control unit (CU – VSX023)	....	AXD1207	AXD1207	

◉ MAIN FUNCTION assembly (AWZ3560)

The MAIN FUNCTION assembly (AWZ3560) is the same as the MAIN FUNCTION assembly (AWZ3673) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWZ3673	AWZ3560	
	CN Pin jack 8P	AKB1182	AKB1127	

◉ SUB FUNCTION assembly (AWZ3561)

The SUB FUNCTION assembly (AWZ3561) is the same as the SUB FUNCTION assembly (AWZ3674) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWZ3674	AWZ3561	
	CN Pin jack 6P	AKB1178	AKB1140	
	CN Pin jack 8P	AKB1179	AKB1144	

◉ VIDEO FUNCTION assembly (AWZ3562)

The VIDEO FUNCTION assembly (AWZ3562) is the same as the VIDEO FUNCTION assembly (AWZ3675) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWZ3675	AWZ3562	
	CN Pin jack 3P	AKB1170	AKB1143	
	CN Pin jack 2P	AKB1173	AKB1118	

◉ ENHANCER assembly (AWZ3563)

The ENHANCER assembly (AWZ3563) is the same as the ENHANCER assembly (AWZ3676) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWZ3676	AWZ3563	
	CN Pin jack 3P	AKB1170	....	

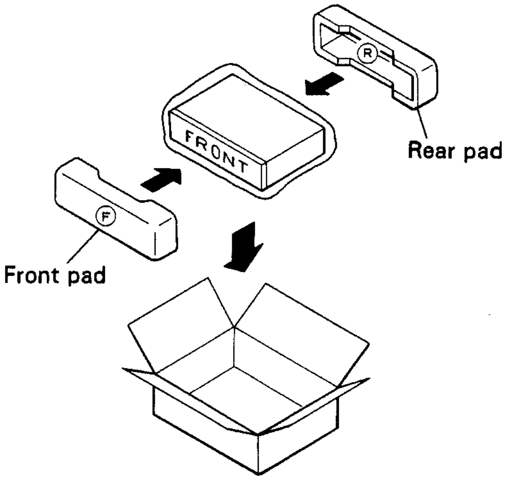
TERMINAL assembly

NOTES:

- *Parts without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*
  Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).
  560Ω 56 × 10^1 561........................RD1/4PS$\boxed{5}\boxed{6}\boxed{1}$J
  47kΩ 47 × 10^3 473........................RD1/4PS$\boxed{4}\boxed{7}\boxed{3}$J
  0.5Ω 0R5..RN2H$\boxed{0}\boxed{R}\boxed{5}$K
  1Ω 010..RS1P$\boxed{0}\boxed{1}\boxed{0}$K
  Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).
  5.62kΩ 562 × 10^1 5621......................RN1/4SR$\boxed{5}\boxed{6}\boxed{2}\boxed{1}$F

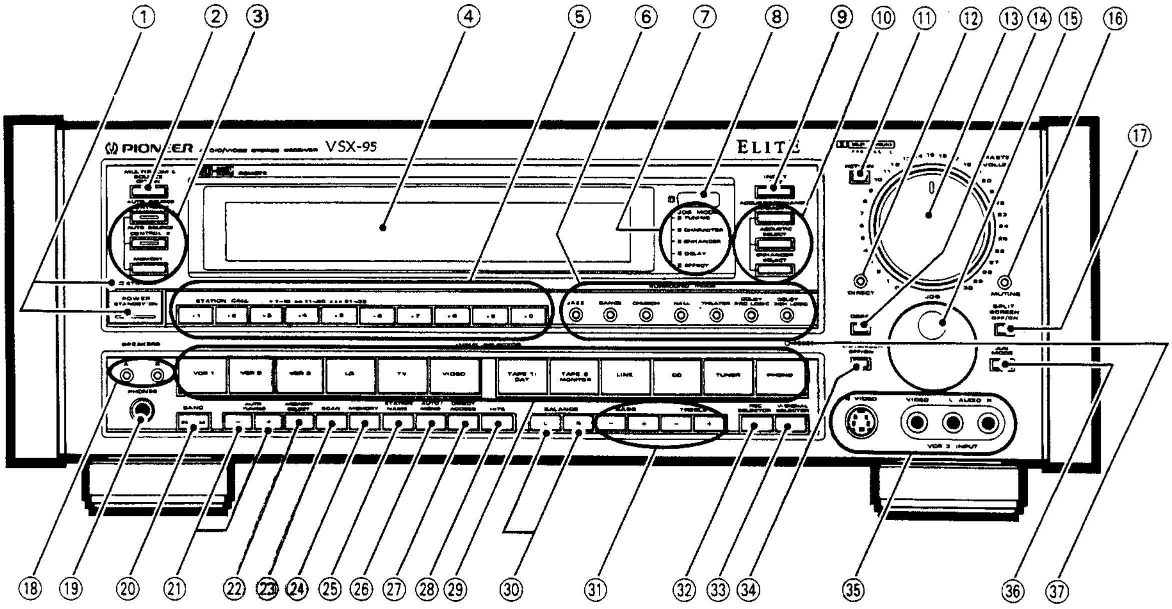
Mark No.	Description	Parts No.
CAPACITORS		
C751−754	CERAMIC CAPACITOR	CKCYB102K50
RESISTORS		
	All resistors	RD1/8PM474J
OTHERS		
	PIN JACK 1P	AKB1139
	PIN JACK 2P	AKB1142
CN	PIN JACK 4P	AKB1181

• PACKING (VSX−9900S)



9. PANEL FACILITIES

FRONT PANEL FACILITIES



① POWER STANDBY/ON switch/indicator

This is the switch for electric power.

ON .... When set to the ON position, power is supplied and the unit becomes operational.

STANDBY .. When set to STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.

The STANDBY indicator lights when the power is STANDBY, and goes out during ON.

② MULTI ROOM & SOURCE button

Use in combination with the separately sold MR-100 Multi-Room remote control unit.

When this button is on, the source selected with the INPUT SELECTOR at that time is set to the Sub room function. The selected sub-function's sound is output through SUB ROOM SPEAKERS, and the video signal is output through the MULTI-ROOM & SOURCE VIDEO OUT jack. If you install speaker systems connected to the MULTI-ROOM SPEAKERS terminals in a different room, you can enjoy different sources in two different rooms with a single main unit.

③ AUTO SOURCE CONTROL, MEMORY buttons

AUTO SOURCE CONTROL 1, 2:

These buttons are for memorizing and recalling your current settings. Both 1 and 2 can be used to memorize settings. If you connect another component, such as a CD player, to the CONTROL OUT jack on the rear panel, the signals to switch power on and start play are also transmitted.

MEMORY:

Use when memorizing settings to an AUTO SOURCE CONTROL button.

④ Display section

⑤ STATION CALL (RANDOM 30 CH) buttons

- These buttons are used to preset and recall desired broadcasting stations. You can also preset AUTO/MONO button settings.

Station call operation example:

If you press the *2 button:

- Once — station 2 is selected.
- Twice — station 12 is selected.
- Three times — station 22 is selected.

NOTE:

Pressing the STATION CALL buttons when a component other than TUNER is selected causes the INPUT SELECTOR setting to switch to TUNER.

- They are also used when performing direct access tuning.

⑥ SURROUND MODE buttons

⑦ JOG MODE indicators

The indicator for the mode that can currently be operated by the JOG dial lights. If it is not the mode you want to operate, switch to the desired mode with the JOG MODE button (㊱).

⑧ Remote sensor window

⑨ INPUT ATT button

Use this when there is distortion due to excessively high input signal level. When this is switched ON, − 10 dB attenuator operates, and the INPUT ATT indicator in the display section lights.

⑩ ACOUSTIC/ENHANCER MEMORY, SELECT buttons

ACOUSTIC/ENHANCER MEMORY:

Use to operate acoustic memory and enhancer memory.

ACOUSTIC SELECT:

Use this to store desired sound quality settings in memory. Also use it to recall memorized sound quality settings from memory. For further details concerning memory operation.

ENHANCER SELECT:

Use this to store a desired enhancer effect in memory, and to recall a desired enhancer effect. For further details concerning memory operation.

When the enhancer has been memorized, then the enhancer will be automatically switched ON when this button is pressed.

FRONT PANEL FACILITIES

⑪ RETURN button

Pressing this button returns the receiver to the following settings, the sound level being controlled by MASTER VOLUME control knob.

• TAPE 2 MONITOR	OFF
• SURROUND MODE	OFF
• SPEAKERS A	ON
• MUTING	OFF
• BALANCE	CENTER
• INPUT SELECTOR	TUNER
• STATION CALL	1 CH*

* When a station is not memorized in 1 CH, station search will automatically proceed from the frequency displayed.

⑫ DIRECT button

Press this to listen to source sound without passing the audio signal through sound quality and balance adjusting circuitry.

The surround mode, and rear and center speakers are automatically switched off.

⑬ MASTER VOLUME control

Use to adjust the sound volume from the front, center and rear speakers.

When you adjust volume by remote control, the indicator on the knob flashes.

When the MULTI ROOM & SOURCE switch is ON, volume level in sub room cannot be adjusted with this knob. To adjust sub room volume, point the remote control at the MR-100 in the sub room and operate.

⑭ DSSS (Digital Simulated Stereo System) button

Operate this when inputting a monaural signal to enjoy a simulated stereo sound. You can use it when a monaural signal is input into both the left and right channels or when a monaural signal is input into only one of the channels.

⑮ JOG dial

This lets you control the following five functions.

(1) Tuner frequency (manual tuning).
(2) Selection of letters for station naming.
(3) Video enhancer effect level adjustment.
(4) Surround's delay time selection.
(5) Surround's total effect level adjustment.

You can select which function you want to control with the JOG MODE button ㊱, but the mode automatically switches when a function changes. For example, if you press the STATION NAME button, the JOG MODE automatically switches to the CHARACTER mode.

⑯ MUTING button

Press to temporarily cut off the sound volume. When pressed again, the sound will return to its previous level.

⑰ SPLIT SCREEN OFF/ON button

If you turn the ENHANCER OFF/ON button ON to add the video enhancer effect, and then turn this button on, the right side of the picture will have the enhancer effect added, and the left side will be without the enhancer effect. The signal that has passed through the enhancer is output through the TO MONITOR TV jacks and VCR OUT jacks.

A split screen picture is output from the TO MONITOR TV jacks. However, S jack output is not affected by enhancer or split screen.

⑱ SPEAKERS A, B buttons

These are ON/OFF buttons for the speaker systems. When switched ON, SPEAKERS indicators (A, B) in the display section light.

⑲ PHONES jack

Connect the plug on your headphones to this jack. To hear only through the headphones, set all SPEAKERS A and B buttons to the OFF position.

NOTE:

There are no ON/OFF switches for the rear and center speakers, so when you want to listen only on headphones, switch surround OFF. If you want to listen with surround ON, reduce rear and center volume levels using the remote control.

⑳ BAND button (FM/AM)

Use this to switch between FM and AM frequency band reception.

㉑ AUTO TUNING buttons (Down (–), Up (+))

+: Performs tuning in ascending frequency order.
–: Performs tuning in descending frequency order.

㉒ CUSTOM MEMORY SELECT button

Recall a genre name with this button.

㉓ SCAN button

Operates when the INPUT SELECTOR is set to TUNER. Station frequencies assigned to the STATION CALL buttons are tuned in, one after another, beginning with the current station no., for approximately 5 seconds each. Press the button again and reception of the station presently being received will continue. Station frequencies not assigned station numbers in the memory are skipped.

When you have selected a CUSTOM MEMORY genre, memory scan is performed on the stations in that genre.

㉔ MEMORY button

Pressing this button will result in the memorization of the current broadcast band, reception frequency, and FM AUTO/MONO mode.

This button is also used to input station names and custom memory operation.

㉕ STATION NAME button

This button is used when inputting station names.

㉖ AUTO/MONO button

Use to select the auto stereo mode or monaural mode when listening to FM broadcasts. The monaural mode has been selected when the FM MONO indicator in the display section is lit.

Auto stereo mode:

Normally, leave in this mode for reception. When a stereo broadcast is received, it will be automatically reproduced in stereo.

During stereo broadcast reception, the STEREO indicator in the display section lights.

Monaural mode:

When receiving distant stations or stations with weak broadcast signals, the input signal may be weak, thus resulting in increased noise during FM stereo broadcasts. In this event, setting the receiver to the monaural mode will reduce the noise; however, FM stereo broadcasts will be reproduced in monaural sound.

NOTE:

This button has no effect on reception of AM broadcasts.

㉗ DIRECT ACCESS button

When this button is pressed, the STATION CALL buttons function as 10-key number buttons for direct input of the desired reception frequency.

When frequencies that cannot be received are entered, the entered frequency value flashes, before reception of the previous frequency resumes.

㉘ HITS (Hyper Intelligent Tuning System) button

- If the HITS button is pressed at the currently displayed station frequency, the receiver searches up and down the frequency for the next station and stops at the first one it finds.
- If the HITS button is pressed during STATION NAME input the receiver performs a memory search in order of ascending station number for memorized stations whose names begin with the same letter as the station just input.
- If the HITS button is pressed during input of numbers or DIRECT ACCESS tuning, the receiver sets the remaining digits, which have not yet been input, to "0", searches for the corresponding frequencies, and stops on the first station it finds.

NOTE:

- *The system searches for stations within successive 1 MHz ranges for FM and 100 kHz ranges for AM. During DIRECT ACCESS tuning, it searches up and down for a station until it reaches the edges of the band. If no receivable station is found within the band range, the receiver returns to the state it was in before the HITS button was pressed.*
- *If the upper (or lower) frequency limit of the receiver is encountered during HITS operation, the receiver stops searching in that direction but continues to search in the other.*

㉙ INPUT SELECTOR buttons

- **Video input selector**

VCR 1: Press when performing playback on a first VCR unit.
VCR 2: Press when performing playback on a second VCR unit.
VCR 3: Press when performing playback on a third VCR unit.
LD: Press when performing playback on an LD player.
TV: Press to watch TV broadcasts from the TV tuner connected to the rear panel TV IN jacks.
VIDEO: Press when performing playback on a VCR connected to VIDEO IN jack.

- **Audio input selector**

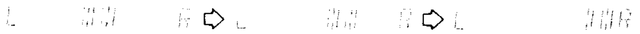
TAPE 1/DAT: Press when performing playback on a DAT or cassette deck.
TAPE 2 MONITOR: Press when performing playback on a second cassette deck.
LINE: Press when performing playback on an audio component connected to the LINE IN jacks.
CD: Press when playing compact discs on a CD player.
TUNER: Press when listening to radio broadcasts.
PHONO: Press when playing records on a turntable.

NOTE:

Because of the digital processing performed by this unit's Digital Signal Processor, high level input may result in distortion. This is particularly true when using a turntable with a high output cartridge. In this case, adjust the volume level with the PHONO LEVEL control on the rear panel so that it is the same as other inputs. If there is distortion due to excessively high input level from another component, use the INPUT ATT button to adjust input level.

㉚ BALANCE buttons

Use to adjust the sound volume balance between left and right speakers.
L: Press to decrease the sound on the right side.
R: Press to decrease the sound on the left side.
Press L and R together to bring the volume balance back to standard (Left = Right).
Example: When pressing and holding the "R" button.



㉛ Tone control buttons

BASS:

Use to adjust the low-frequency level. Press the + button to increase low-frequency level, and the − button to decrease it.
When both sides (+, −) of the BASS control are pressed simultaneously, the base response will be set to the flat (normal) condition. "BASS C" is shown in the display section.

TREBLE:

Use to adjust the high-frequency level. Press the + button to increase high-frequency level, and the − button to decrease it.
When both sides (+, −) of the TREBLE control are pressed simultaneously, the treble response will be set to the flat (normal) condition. "TREBLE C" is shown in the display section.
Adjust TONE CONTROL settings are indicated in the display section for several seconds.

㉜ REC SELECTOR button

You can select the component to be recorded from, on TAPE 1, VCR 1, VCR 2, without using the INPUT SELECTOR.
Each time you press the REC SELECTOR button, the components change in the following order.

→ TUNER → PHONO → VCR 1* → VCR 2* → VCR 3 → LD
CD ← LINE ← TAPE 1* ← VIDEO ← TV ←

When the REC SELECTOR has been through all the components once, REC SELECTOR switches off.

Recording between units marked with the "*" is possible in the following relationships.
From TAPE 1 on VCR 1 and 2, from VCR 1 on VCR 2 and TAPE 1, and from VCR 2 on VCR 1 and TAPE 1.
Do not select the component you wish to record on (for example, VCR 1), with the REC SELECTOR.

㉝ V (Video) SIGNAL SELECTOR button

Press this to switch VIDEO OUT (TO MONITOR TV) and VCR VIDEO OUT in the following sequence: (Audio does not change)

→ VCR 1 → VCR 2 → VCR 3 → LD → TV → VIDEO
OFF ←

Indications are only displayed during operation.
There is no picture when it is OFF.

㉞ ENHANCER OFF/ON button

Use to switch the video enhancer effect ON/OFF during playback or recording of a video.
When it is switched ON, adjust the degree of effect with the JOG dial ⑮.
If you turn ON the SPLIT SCREEN OFF/ON button ⑰, the right half of the screen shows a picture with the enhancer ON, and the left half of the screen shows a picture with the enhancer OFF.
The enhancer has no effect on S jack and MULTI-ROOM & SOURCE VIDEO OUT jack video signals.

㉟ VCR 3 INPUT jacks

Video components such as a VCR or TV camera, etc. can be connected here.

㊱ JOG MODE button

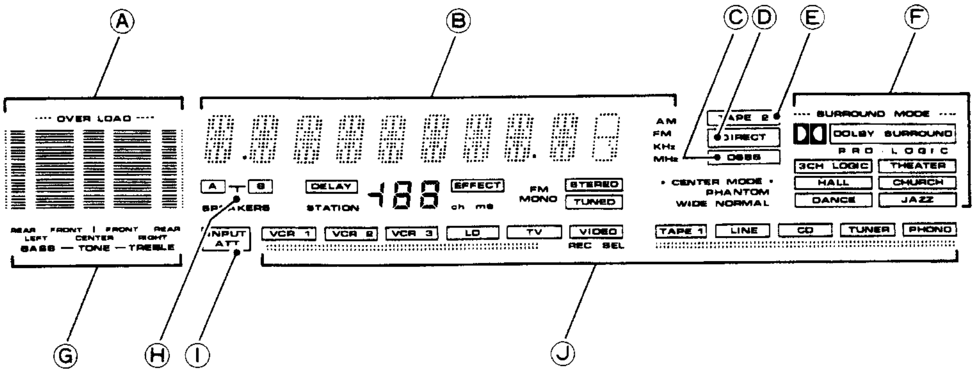
Use this to select the mode you want to control with the JOG dial ⑮.
The selected mode is indicated by the JOG MODE indicators ⑦.

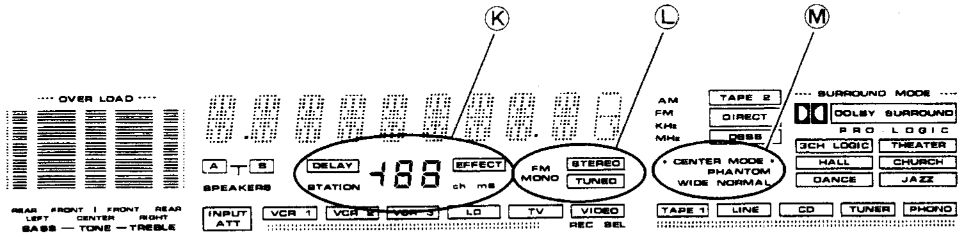
㊲ Reset button

Use this when normal operation becomes impossible because of external influences such as static electricity or lightning, or when operation is impossible even when operation buttons are pressed. Press this button to return to normal operating conditions.
If you press this button when the power is ON, the unit switches to POWER STANDBY, and the entire contents of the memory are erased.

FRONT PANEL FACILITIES

DISPLAY SECTION


Ⓐ
Ⓑ
Ⓒ
Ⓓ
Ⓔ
Ⓕ
···· OVER LOAD ····
REAR LEFT
FRONT
CENTER
FRONT RIGHT
REAR
BASS — TONE — TREBLE
A
B
SPEAKERS
DELAY
STATION
188
EFFECT
ch ms
FM MONO
STEREO
TUNED
AM
FM
KHz
MHz
TAPE 2
DIRECT
DSSS
• CENTER MODE •
PHANTOM
WIDE NORMAL
···· SURROUND MODE ····
DOLBY SURROUND
PRO LOGIC
3CH LOGIC
THEATER
HALL
CHURCH
DANCE
JAZZ
INPUT ATT
VCR 1
VCR 2
VCR 3
LD
TV
VIDEO
REC SEL
TAPE 1
LINE
CD
TUNER
PHONO
Ⓖ
Ⓗ
Ⓘ
Ⓙ


Ⓚ
Ⓛ
Ⓜ
···· OVER LOAD ····
DELAY
STATION
EFFECT
ch ms
FM MONO
STEREO
TUNED
• CENTER MODE •
PHANTOM
WIDE NORMAL
···· SURROUND MODE ····

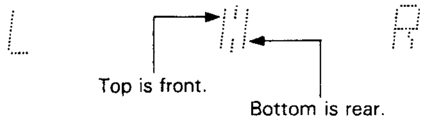
Ⓐ Level/Tone meters

The level meter is usually displayed. If the input level is too high, the display switches, and the OVER LOAD indicator lights.

During Tone control operation, the display switches accordingly.

Ⓑ Character display/Balance meter

- Character display indicates such information as function, received frequency, station name, acoustic memory, and enhancer memory, etc.
- Front and rear left/right balance is indicated. This is displayed during balance adjustment, after which indications return to character display.



Top is front.

Bottom is rear.

Ⓒ DSSS indicator

Lights when the DSSS button is ON.

Ⓓ DIRECT indicator

This lights when the Direct mode is switched ON.

Ⓔ TAPE 2 indicator

Lights when the TAPE 2 MONITOR button is in the ON position.

Ⓕ SURROUND MODE indicators

These display the selected surround mode. When all indicators are out, surround is OFF.

Ⓖ Meter mode indicator

Indicates the display modes mentioned in Ⓐ.

Ⓗ SPEAKERS indicators

Shows which speaker system (or systems) are switched ON.

Ⓘ INPUT ATT indicator

This lights when the INPUT ATT button is switched ON.

Ⓙ REC selector indicators

- The recording source selected with the REC SELECTOR button is usually displayed.

Ⓚ Station call no./Delay time/Surround effect/Enhancer level display

- Usually, the STATION indicator and "ch" light to display the station call number.
- When adjusting surround delay time, the DELAY indicator and ms light to display delay time.
- When adjusting surround effect level, the EFFECT indicator lights, and effect level from 5 to 100 is displayed.
- When adjusting enhancer level, enhancer level from -50 to 50 is displayed.

Ⓛ Tuning indicators

FM MONO:	This lights when you select MONO with the AUTO/MONO button. When this indicator is lit, reception of FM stereo broadcasts is also monaural.
STEREO:	When the FM MONO indicator is out (auto stereo mode), this lights when receiving an FM stereo broadcast.
TUNED:	Lights when a station is tuned.

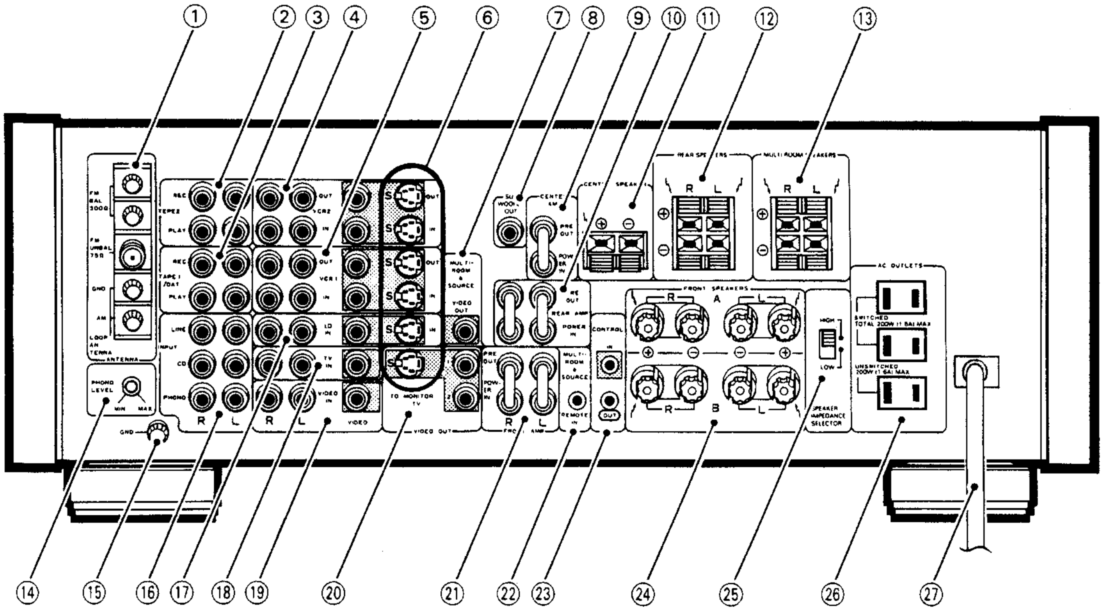
Ⓜ CENTER MODE indicators

These display the center mode (NORMAL, WIDE, PHANTOM) during THEATER, DOLBY PRO LOGIC SURROUND or DOLBY 3CH LOGIC operation.

Warning indication:

Display section indicators will flash to indicate that operation is not possible in a particular situation when you press a button. With Multi-Room & Source, the button itself flashes.

REAR PANEL FACILITIES



① FM/AM ANTENNA terminals

Use these antenna terminals for reception of normal FM and AM broadcasts.

Attach the accessory AM Loop and FM T-type antennas, here.

- For details regarding antenna connection, see the section "HINTS FOR BETTER RECEPTION".

② TAPE 2 jacks

Connect a second cassette deck to these jacks.

Connection for Recording

The tape recording jack (TAPE REC) on the cassette deck should be connected to the REC side of the TAPE 2 jack on the receiver with a pin plug connecting cord.

Connection for Playback

Connect the TAPE PLAY jack on the cassette deck to the PLAY side of the TAPE 2 jack on the receiver with a pin plug connecting cord.

③ TAPE 1/DAT jacks

Connect a DAT (digital audio tape deck) or your primary analog cassette deck to these jacks.

Connection for Recording

The tape recording jack (TAPE REC) on the cassette deck or DAT should be connected to the REC side of the TAPE 1/DAT jack on the receiver with a pin plug connecting cord.

Audio recording from TAPE 2 is not possible.

Connection for Playback

Connect the TAPE PLAY jack on the cassette deck or DAT to the PLAY side of the TAPE 1/DAT jack on the receiver with a pin plug connecting cord.

④ VCR 2 jacks

[VIDEO IN]

Connect to the VCR 2 VIDEO OUTPUT jacks.

[AUDIO IN (L, R)]

Connect to the VCR 2 AUDIO OUTPUT jacks.

[VIDEO OUT]

Connect to the VCR 2 VIDEO INPUT jacks.

[AUDIO OUT (L, R)]

Connect to the VCR 2 AUDIO INPUT jacks.

⑤ VCR 1 jacks

[VIDEO IN]

Connect to the VCR 1 VIDEO OUTPUT jacks.

[AUDIO IN (L, R)]

Connect to the VCR 1 AUDIO OUTPUT jacks.

[VIDEO OUT]

Connect to the VCR 1 VIDEO INPUT jacks.

[AUDIO OUT (L, R)]

Connect to the VCR 1 AUDIO INPUT jacks.

⑥ S (connector) video jacks

When used in conjunction with a VCR, Video disc player (LaserDisc player) or TV monitor equipped with S video jacks, connect to these jacks.

⑦ MULTI-ROOM & SOURCE VIDEO OUT jack

When using the Multi-Room & Source function, use this to connect the TV monitor for use in the Sub room.

⑧ SUB WOOFER OUT jack

If you want to boost the low frequencies, or you want to use the unit in a 3D system, connect to a sub woofer power amplifier.

REAR PANEL FACILITIES

⑨ CENTER AMP jacks

[POWER IN]

When a separate preamplifier is used for surround center speaker and this unit is used as a power amplifier, connect the preamplifier to this jack.

[PRE-OUT]

When a separate power amplifier is used to drive the surround center speaker, connect the power amplifier to this jack.

⑩ REAR AMP jacks

[PRE OUT]

When a separate power amplifier is used to drive the rear speakers, connect the power amplifier to these jacks.

[POWER IN]

When a separate preamplifier is used for rear speakers and this unit is used as a power amplifier, connect the preamplifier to these jacks.

⑪ CENTER SPEAKERS terminals

Connecting the surround center channel speaker system.

Speaker impedance:

Use a center speaker with a nominal impedance of 8 Ω.

NOTE:

Do not allow any of the code's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdown may occur when conductors come into contact with each other.

⑫ REAR SPEAKERS terminals

Connect the rear speakers to these terminals.

Speaker impedance

Connect speaker systems with a nominal impedance of between 8 and 16 Ω.

NOTE:

Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.

⑬ MULTI-ROOM SPEAKERS terminals

Connect to the Multi-room speakers.

Speaker impedance

Connect speaker systems with a nominal impedance of between 8 and 16 Ω.

NOTE:

Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.

⑭ PHONO LEVEL control

Use to adjust turntable input level. If distortion occurs when you are using a high-output cartridge, adjust the volume level until it's the same as another input, such as TUNER.

⑮ GND terminal

Connect the turntable ground lead to this terminal.

⑯ Audio INPUT jacks

PHONO...........	Connect to turntable.
CD.................	Connect to compact disc player.
LINE..............	Connect to the audio output jacks of an additional audio component.

⑰ LD jacks (input)

[VIDEO IN]

When watching the video image from an LD player or a VCR used for playback, connect its VIDEO OUTPUT jack here.

[AUDIO IN (L, R)]

When playing back the audio channel from an LD player (CD CDV LD player) or a VCR for playback, connect its AUDIO OUTPUT jacks here.

⑱ TV jacks (input)

Use these jacks if you wish to connect a TV tuner with both video and audio outputs.

[VIDEO IN]

Connect the TV tuner's VIDEO OUTPUT to this jack.

[AUDIO IN (L, R)]

Connect the TV tuner's AUDIO OUTPUT to these jacks.

⑲ VIDEO jacks (input)

Connect the output jacks of video components.
For example, connect a playback-only VCR or a video camera.

⑳ VIDEO OUT TO MONITOR TV jacks (output)

Use to connect a TV monitor or a TV set with video input terminals for watching program materials from a VCR or Video disc player (LD player) connected to this unit.

㉑ FRONT AMP jacks

[PRE-OUT]

When a separate power amplifier is used to drive the front speakers, connect the power amplifier to these jacks.

[POWER IN]

When a separate preamplifier is connected and this unit is used as power amplifier, connect the preamplifier to these jacks.

㉒ MULTI-ROOM & SOURCE REMOTE IN jack

When using the MULTI-ROOM & SOURCE function, connect to the separately sold MR-100 Multi-Room remote control unit.

㉓ CONTROL IN, OUT jacks

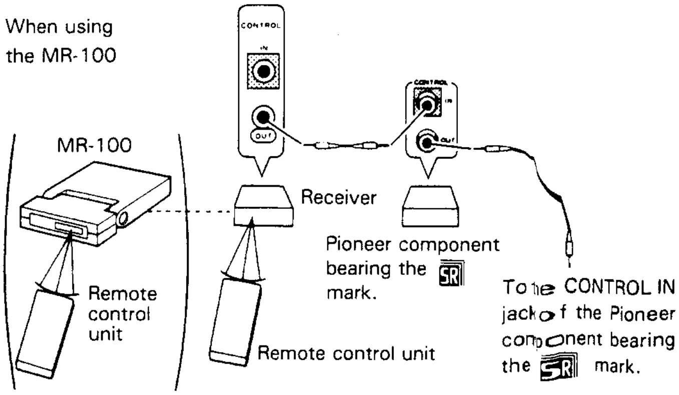
Used for system control with other Pioneer components bearing the SR mark.

IN: For connection from the CONTROL OUT jack of another component (TV, etc.).

OUT: For connection to the CONTROL IN jack of another component.

NOTE:

The receiver's remote sensor does not function when a plug is inserted in the IN jack. To operate, point the remote control unit at the remote sensor on the component to which the receiver's IN jack is connected.


When using
the MR-100
MR-100
CONTROL
IN
OUT
CONTROL
IN
OUT
Receiver
Pioneer component bearing the SR mark.
Remote control unit
Remote control unit
To the CONTROL IN jack of the Pioneer component bearing the SR mark.

㉔ FRONT SPEAKERS terminals

A: Connect to the first set of speakers.
B: Connect to a second set of speakers.

Speaker impedance:
Refer to ㉕ SPEAKER IMPEDANCE SELECTOR switch.

NOTE:
Do not allow any of the code's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdown may occur when conductors come into contact with each other.

㉕ SPEAKER IMPEDANCE SELECTOR switch

Set this switch to match the impedance of your front speakers.

☐I When using one pair of speakers:

Impedance of a speaker	Selector position
8 Ω to less than 16 Ω	HIGH
4 Ω to less than 8 Ω	LOW

☐II When using two pairs of speakers:
Select LOW as the selector switch position and use speakers with a nominal impedance of between 8 and 16 Ω.

NOTE:
Turn off the receiver's power before changing the impedance selector switch setting.

㉖ AC OUTLETS

SWITCHED TOTAL 200 W (1.6 A) MAX
Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 200 W (1.6 A).

UNSWITCHED 200 W (1.6 A) MAX
Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 200 W (1.6 A).

NOTE:
Do not connect appliances with high power consumption such as heaters, irons, or television sets to these AC OUTLETS in order to avoid overheating and fire risk.
This can cause the receiver to malfunction.

CAUTION:
DO NOT CONNECT MONITOR OR TV SET.

㉗ AC Power cord

Connect to AC wall socket.

NOTE:
This unit should be disconnected by removing the power plug from the wall socket when not in regular use, e.g. when on vacation.

10. SPECIFICATIONS

Amplifier section

OUTPUT POWER (POWER AMP IN)

(Front)

Continuous average power output of 130 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.005 % total harmonic distortion.**

Rear, center	40 W + 40 W, 40 W (1 kHz, 0.08 %, 8 Ω)

Audio section

Damping Factor	
1 kHz, 8 Ω	100
Input (Sensitivity/Impedance)	
PHONO MM	2.5 mV/47 kΩ
CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV, LD, VCR 1, VCR 2, VCR 3	150 mV/47 kΩ
POWER AMP IN	1 V/47 kΩ
Phono Overload Level (T.H.D. 0.08 %, 1 kHz)	
PHONO MM	150 mV
Output (Level/Impedance)	
TAPE 1/DAT REC, TAPE 2 REC, VCR 1 OUT, VCR 2 OUT	150 mV/2.2 kΩ
PRE AMP OUT	1 V/220 Ω
Frequency Response	
PHONO MM	20 Hz to 20,000 Hz ± 0.3 dB
CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV, LD, VCR 1, VCR 2, VCR 3	5 Hz to 100,000 Hz $^{+0}_{-3}$ dB
Tone Control	
BASS	±8 dB (100 Hz)
MIDDLE	±8 dB (1 kHz)
TREBLE	±8 dB (10 kHz)
Loudness Contour	+6 dB (100 Hz) +3 dB (10 kHz)
Signal-to-Noise Ratio (IHF, short-circuited, A network)	
PHONO MM	82 dB
CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV, LD, VCR 1, VCR 2, VCR 3	98 dB
Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]	
PHONO MM	77 dB
CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV, LD, VCR 1, VCR 2, VCR 3	80 dB

VIDEO Section

Input (Sensitivity/Impedance)	
VCR 1, VCR 2, VCR 3, LD, TV, VIDEO, ADAPTOR	1 Vp-p/75 Ω
Output (Level/Impedance)	
VCR 1, VCR 2, ADAPTOR, MONITOR	1 Vp-p/75 Ω
Frequency Responce	
VCR 1, VCR 2, VCR 3, LD, TV, VIDEO, ADAPTOR → MONITOR	5 Hz – 10 MHz $^{+0}_{-3}$ dB
Signal-to-Noise Ratio	55 dB
Cross Talk	55 dB (3.58 MHz)
Enhancer	±3 dB (2 MHz)

[S terminals]

Input (Sensitivity/impedance)	
VCR 1, VCR 2, LD	Luminance signal: 1 Vp-p/75 Ω Color difference signal: 0.286 Vp-p/75 Ω
Output (Level/impedance)	
VCR 1, VCR 2, TO MONITOR TV	Luminance signal: 1 Vp-p/75 Ω Color difference signal: 0.286 Vp-p/75 Ω
Frequency response	
Luminance signal	5 Hz to 10 MHz, $^{+0}_{-3}$ dB
Signal-to-Noise Ratio	
Luminance signal	55 dB
Cross talk	55 dB (3.58 MHz)

Surround section

Input (Sensitivity/Impedance)	
REAR POWER AMP IN	1 V/47 kΩ
CENTER POWER AMP IN	1 V/47 kΩ
Output (Level/Impedance)	
REAR PRE AMP OUT	1 V/470 Ω
CENTER PRE AMP OUT	1 V/470 Ω

FM Tuner Section

Frequency Range	87.5 MHz to 108 MHz
Usable Sensitivity	Mono; 10.8 dBf, IHF (0.95 μV/75 Ω)
50 dB Quieting Sensitivity	Mono; 15.3 dBf, (1.6 μV/75 Ω) Stereo; 37.0 dBf, (19.5 μV/75 Ω)
Signal-to-Noise Ratio	Mono; 80 dB (at 65 dBf) Stereo; 76 dB (at 85 dBf)
Distortion	Mono; 0.08 % (100 Hz) 0.08 % (1 kHz) 0.2 % (6 kHz) Stereo; 0.2 % (100 Hz) 0.15 % (1 kHz) 0.3 % (6 kHz)
Capture Ratio	1.0 dB
Alternate Channel Selectivity	65 dB (400 kHz)
Stereo Separation	50 dB (1 kHz)
Frequency Response	30 Hz to 15 kHz $^{+0.5}_{-2.0}$ dB
Image Interference Ratio	50 dB
IF Interference Ratio	80 dB
AM Suppression Ratio	55 dB
Spurious Interference Ratio	70 dB
Antenna Input	300 Ω balanced 75 Ω unbalanced

AM Tuner Section

Frequency range	When 10 kHz step: 530 kHz – 1,700 kHz When 9 kHz step: 531 kHz – 1,602 kHz
Sensitivity (IHF, Loop antenna)	300 μV/m
Selectivity	30 dB
Signal-to-Noise Ratio	50 dB
Image Interference Ratio	40 dB
Antenna	Loop antenna

SPECIFICATIONS

Miscellaneous

Power requirements	AC 120V, 60 Hz
Power consumption	600 W, 790 VA
In standby condition	3 W
AC Outlets	SWITCHED x 2: TOTAL 200 W MAX UNSWITCHED x 1: 200 W MAX
Dimensions	420 (W) x 162 (H) x 421 (D) mm 16-9/16 (W) x 6-3/8 (H) x 16-9/16 (D) in
Weight (without package)	14.6 kg (32 lb 3 oz)

Furnished Parts

FM T-type antenna	1
AM Loop antenna	1
Size "AA" Alkaline batteries (LR6/AM-3)	2
Remote control unit	1
Operating Instructions	1

NOTE:

Specifications and the design subject to possible modifications without notice due to improvements.

* *Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier.*

** *Measured by Audio Spectrum Analyzer.*